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UNIVERSITY OF ALBERTA

GUIDELINES
FOR DEVELOPING DISTANCE EDUCATION COURSES

By
Rebecca Nthogo Lekoko ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial Fulfillment of the requirements for the Degree of Master of Education.

in

Adult and Higher Education
Department of Educational Policy Studies

Edmonton, Alberta
Spring 1995.

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Rlekoko

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UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read and recommended to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled GUIDELINES FOR DEVELOPING DISTANCE EDUCATION COURSES submitted by Rebecca Nthogo Lekoko in partial fulfillment for the degree of Master of Education in Adult and Higher Education.

Dr. Dave Collett

Dr. Margaret Haughey

Dr. Barbara Spronk

Date April 19/95

DEDICATION

To mme and rre whose love, steadfast support and inspirational advise gave me confidence to undertake a study here in Canada,

and

To my dear son, Mphoentle who is ever present in all aspects of my life.

Abstract

This study was designed to provide course developers with guidelines that might be used for developing distance education courses. The specific research purpose was to explore guidelines used by selected Alberta distance education course developers. To facilitate this, the study was organized around five areas of exploration, namely, The Potential Learners, Media and Support Services, Structure and Sequence, Activities and Assessment and Course Development Approaches. Therefore each of these five categories contributed to an understanding of the guidelines which might be useful in the development of distance education courses.

The most insightful observation of this study was that the key to an effective attractive distance education courses is the guidelines by which careful planning and decision regarding course development and course implementation could be made. Several guidelines were suggested by the respondents, all of which are said to be subject/context-specific. In this matter, respondents views were summed up by the comment that "there is no silver bullet that cuts across all courses." Therefore guidelines presented in this study should be critically considered for the reality of the situation at hand.

Generally, the consensus was that there would be considerable advantage for course developers to be guided by course development guidelines when developing courses. In terms of detail, it has been suggested that development and implementation of distance education courses might proceed on the basis of these guidelines:

1. **Distance education courses should predominantly be print-based, but should make use of other technologies, for example, facsimile, computers, teleconferencing etc. And to be successfully applied to distance education, i) the technology should facilitate the learning process ii) it should be accessible to all learners at an affordable price and a time convenient to them and that iii) users should be motivated and well prepared to use it. These, coupled with the ease of physical access would create access to learning opportunities in an effective and attractive way.**

2. The need to supplement or support print-based material with other technologies obviate the need for a multi-media approach to course delivery, and where necessary this should be done.

3. Developers should have a clear sense of both the course, for example, its objectives, as well as the characteristics of the targeted learner population, for example, their age, educational level, entry level skills and educational needs. All these would ensure congruence between the characteristics of the learners and the design, content and purposes for the course.

4. In developing and choosing course materials, selection criteria should ensure that i) materials are free from gender, ethnic and racial bias ii) readability of the printed materials matches the learner's reading level iii) that the course content and learning activities/exercises should be designed to guide and teach the learner. Also it was suggested that developers should strive for variety of learning activities which require a range of intellectual responses.

5. Developers should challenge institutions to successfully integrate the library media into course implementation process. Access to library resources, particularly textbooks was deemed very important and could be facilitated by the use of technologies, such as fax, telephones and the mailing services.

6. In addition to the library service, student support services could embrace tutoring, counseling, telephone contact with the tutors etc.

All these guidelines should be kept in mind when developers make decisions about the development and implementation of a new course. Substantially, the practical implications of all these guidelines have been made clear - that is, developing successful and effective courses could be approached from different angles, for example, employing a course team or contracting out the development. Therefore the developers would choose only those guidelines that interest them and are suitable to their situation.

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Friends and Family Members: **It makes a bright day to wake up to happy smiles and laughters of friends. Their care, support and encouragement are inspirational to a step forward in life.**

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CHAPTER ONE

THE PROBLEM AND SETTING

Overview of the Problem

There is a general and critical attitude towards the quality, efficiency, appropriateness and achievement of conventional education as currently practiced (Ljosa,1992; Botswana Commission on Education, 1993). Criticisms convey to us that the conventional form of education alone cannot accommodate and satisfy the growing demand and needs for education.

For the purposes of extending educational access and equalizing educational opportunities, considerable attention is focused on distance education, particularly its potential to "widen access to education at a number of levels in a cost-effective manner, which is often cheaper than the conventional institution-based courses" (Botswana Commission on Education, 1993:300). As a result of this, the role of distance education in many countries is promising.

Some time ago, distance education, traditionally known as correspondence education, was judged to be a lonely, inferior and difficult way of learning, particularly because of its transactional distance, the distance between the learner and the teacher (Jenkins, 1988; Holmberg, 1986). However, literature indicates that important advances have been made in this area. In many countries, educational policy makers no longer deprive this area of its needed resources and deny it the respect it deserves. Consequently, many people embrace it as an equal partner to conventional education in the education system of the country. In this respect, Jenkins (1988) observes that "distance education is widely used as complementary to the formal education, both for expanding access and improving quality" (p.103).

Evidently, attempts are being made to systematically identify the range of courses and/or programs to be provided through the distance education mode, so as to accord to this area the respect and status enjoyed by the conventional form of education. Going hand-in-hand with this is the debate over what constitutes an adequate definition of the term distance education.

Generally, there is lack of agreement over terminology and definitions within this field (Moore, 1991). Since different countries provide varying levels and types of distance education programs and courses, and further, these programs and courses vary among and within the institutions, many definitions become valid for specific context or practices. They therefore become difficult to generalize to the entire field hence many distance educators do not "speak with a common vocabulary" (Carl, 1989; Moore, 1991).

In general terms, distance education is acknowledged as a practice or "a method of education" (Rumble, 1989:28). This conceptualization of distance education guides many distance educators when devising definitions to suit their specific practices, for example, the 1993 Report on Western Canadian Distance Education defines distance education as follows:

1. It is a structured learning in which the instructor and students are separated by time and/or space;
2. It involves two--way communication through print materials and/or one or more technical media; and
3. It includes delivery between and among different campuses of an institution, or from one institution to another, but not courses in which the student and instructor are both on the same campus, since the latter would include all forms of individualized instruction" (p.1).

The definition is indicative of the types of distance education program or courses offered by different institutions. It does reflect also the media used and hence the "quality" of courses offered. Compare the Western Canadian Distance Education definition with the definition of distance education stated by the 1993 Botswana Commission on Education which defined it as "a mode of learning in which the teacher and learner are usually physically separated and which is based on materials produced by the central organization" (p. 300). Obviously, from these definitions, one can detect that the scope and type or practices of distance education provided in Canada and in Botswana differ.

However, the two definitions agree that distance education learners are to a great extent independent of the help and guidance of the teachers. As a result, many writers suggest that courses developed for distance education must be learner-centered.

Undoubtedly, distance education learner's success in courses is conditioned by the design of the course, particularly its content or course materials. Consequently, the sequencing of the course and conditions present in each course should take into consideration this factor. One way towards this would be through deliberate application of course development guidelines.

From the literature, there is convincing evidence that guidelines for developing distance education courses are a powerful instrument to distance education programs' or courses' success. In support of this, Baath (1982) contends that "one way of developing distance education for the future would appear to be through deliberate application of relevant educational theories or models" (p.37). The use of conceptual guidelines in developing distance education courses therefore represents one successful means of ensuring quality and widening the scope and acceptance of distance in our education systems.

A study by Dr. D. Mutava (1989) "Certificate in Adult Education," (CAE, University of Botswana) carries a lot of support for this. In this study, Dr. Mutava has revealed that distance education courses offered to CAE learners are not appropriate for the learners. One potential reason is that appropriate design principles were not followed when these courses were developed. These courses were prepared in a hurry and therefore were not subjected to critical scrutiny in order to make them appropriate or suitable for their clientele.

It would, for example, be a logical step for course developers responsible for these courses to consider using distance education conceptual course development guidelines when revising and/or developing new courses. It is also important that distance education courses be attractive and effective especially in Botswana, where distance education is still used as a vehicle for repairing some shortcomings of the conventional education. It is therefore necessary that course developers should apply

course development guidelines when developing new courses to ensure quality.

Further, findings of McLaren, Teare and Schieman, (1992) lend support to the assertion that distance education developers need guidelines to develop distance education courses that are more suited for the learners, because without careful guidelines the relative merits of distance education courses may be lost or incorrectly estimated. They assert that "courses developed without due concern for the learner are often inadequate and possibly disastrous [that is] when sound design principles are not followed" (p. 61). The underlying assumption is that course development efficiency does not come automatically. It could only be achieved and maintained through careful planning and deliberate application of well tried and tested course development guidelines. An exploration or survey of guidelines that are currently used when developing distance education courses will provide insights into the development of quality and effective courses.

Purpose of the Study

Many countries are making use of distance education to extend educational access and to try to equalize opportunities for education. The move in this direction necessitates the demand and conditions for quality and effective courses in distance education. The practice has been that big institutions provided courses for smaller institutions' usage, or their course development procedures served as models for the smaller institutions (Kelly, 1993). However, this has been, and is still, challenged and scrutinized as new demands and challenges face these institutions. A considerable observation is made by Kelly who contends that course development systems that work well for big institutions "do not necessarily transfer well to smaller scale institutions' application (p.52). Small institutions now endeavor to develop their own courses.

The acceptance of the importance of course development guidelines has raised a genuine curiosity to explore guidelines that are currently used by some institutions, and possibly, how in praxis they achieve theoretical compatibility. The survey produces insights into the kind of courses likely to attract the clientele and therefore

be contributory to widening the scope, quality and success of distance education courses/programs.

Furthermore, the findings of the study undertaken by Dr. Mutava (1989) together with the researcher's interest in course development issues prompted the researcher to design a study that would survey both the available literature on course development issues and the experiences of distance education course developers.

The purpose of the study was therefore to systematically explore guidelines that are used to develop distance education courses and ways in which they are operationalized. Subsumed in these major purposes were factors like resources and infrastructure necessary for the facilitation of the development and delivery of effective distance education courses.

It is hoped that results of this investigation can be later used as a backdrop against which course development in Botswana can be compared.

Research Questions

The research was designed to answer the following question:

What course development guidelines are used by selected Alberta distance education course developers and how are these guided by theoretical formulations? The study's sub-questions were:

I) What specific guidelines are especially influential in contributing to the development of successful distance education courses?

II) What are some of the critical issues that affect the delivery of distance education courses in Alberta?

III) What support services do course developers utilize in order to readily foster the development and delivery of distance education courses or programs?

IV) To what extent do theory and theoretical models in distance education play a role in distance education course development in the Province of Alberta?

Significance of the Study

To plan, develop and deliver distance education courses, institutions may be

guided by meaningful and existing course development guidelines which have been proved successful by those who have utilized them. And, since the researcher has been unable to locate any qualitative study addressing guidelines for developing distance education courses, this study sought to make significant contribution to the apparent limited studies in this area. Therefore, this study gained its significance from this contention, that a review of researched literature revealed that no such study has so far been undertaken, and from the corresponding need for guidelines for developing distance education courses. For Botswana, particularly the CAE program, a study of this nature is likely to contribute to their move towards appropriate or relevant and quality courses (Mutava, 1989).

However, care must be taken when applying these guidelines. In order to have a clear perspective of the usefulness of guidelines explored by this study, course developers who intend to use them for their specific situations must certainly analyze them and critically judge their applicability and usefulness to their specific situations.

Assumptions

This study which explored guidelines used to develop distance education courses was governed by the following assumptions;

- That the participants were honest and willing to express their opinions perceptions and experiences freely;
- That the questionnaire and the semi-structured interviews were well defined, designed and appropriate techniques for this study, hence they uncovered honest reflections of course developers practices and perceptions towards some course development guidelines;
- That the questionnaire and the interview complement each other and they have demonstrated compatibility with the study's defined topic and purposes.

Limitations

This study was subject to several features which have some limiting effects on the generalization of its findings. Of the possible limitations of this study, the researcher considered the ones listed below to be very influential.

- **Because the technological conceptualization of distance education and its organizational forms in Alberta, a more industrialized place, are at variance with the conceptualization of distance education in Botswana, a less industrialized country, results of this study may not be readily applicable to Botswana.**
- **The influence of the institutional support services in practical course development in Alberta, without a match in Botswana may render guidelines explored in this study tenuously transferable to Botswana applications.**
- **The tendency for respondents to give inaccurate and/or incomplete responses were unavoidable. However, to try to reduce this, respondents were assured that the confidentiality of their responses would be strictly adhered to.**

Delimitation

This study was subject to several delimiting factors, all of which were necessary in order to reduce the scope of the study to a manageable size and also to permit a focused and rigorous exploration of the research topic. Factors which were delimiting were;

- **Although there are many institutions in the Province of Alberta which offer distance education courses, not all of them develop their own courses. Therefore, only those institutions and individuals directly involved in the development of distance education courses were respondents in this study.**
- **While the study has potential for covering wider area and participants, it was limited to a voluntary sample of distance education course developers**

in some institutions in the Province of Alberta. Therefore, the findings may not be generalizable to other applications.

- Although course development issues cover a wide/broad perspective, for example, planning characteristics and presentational/delivery characteristics, this study was delimited to only the design and development characteristics.

Definition of Terms

Definitions of terms are provided here in order to help the readers conceptualize words as operationalized in this study. This will provide a common basis for understanding the discussion of this work. These definitions have been guided by the researched literature.

By no means does the researcher intend to provide rigorous definitions that cover wide uses and variations of these terms. The following terms are frequently used in this study and for the purpose of this study,

1. Distance education is defined with the following characteristics:

- it refers to formal and/or non-formal instructional situations characterized by varied degree of access to the teacher, tutor and peers (Zigerell, 1988) and,
- it involves two-way communication through print-materials and/or one or more technical media (Report on Western Canadian distance learning in post-secondary education, Nov., 1993).

2. Course development guidelines or course development models refer to systematic guides that give course developers a sound interactive design framework in the process of planning and developing the courses (Johnsen, 1993).
3. Course development refers to both course design and course writing.
4. A course refers to a sequence of structured learning which may occupy the student part-time or full time. It may be part of the program of studies aiming towards a formal qualification. And, it is treated as an entity for

administrative purposes (Miller, 1987).

5. Course developers refers to experts in the relevant subject matter, together with media specialists, editors, course coordinators etc., who work as a team to plan and write or develop a course.

Organization of Thesis

This thesis is organized into five chapters. In chapter one, the background and setting of the study is described as well as the problem, its significance and factors delimiting and limiting the scope of the study.

Chapter two provides a review of literature. In addition to the main research focus, "Guideline for Developing Distance Education Courses," the background and situational context of distance education in today's societies is briefly reviewed. Emphasis is placed on Botswana situation to which the findings of this study is hoped to assist in the future development of distance education courses.

Chapter three outlines the design of the study as well as the qualitative research method employed in this study.

Chapter four presents the data, its analysis and findings emerging from the data analysis.

Finally, chapter five presents the summary, conclusions and recommendations of this study.

CHAPTER TWO

REVIEW OF LITERATURE

DISTANCE EDUCATION IN TODAY'S SOCIETIES

A Brief Overview

Introduction

Today's modern societies are characterized above all by change and complexity. It is therefore of utmost importance that every individual should be prepared educationally to meet all the challenging needs and aspirations of our changing societies. Issues of equality of education or wider access to education are therefore fundamental.

The wide-spread realization is that the conventional/traditional education system alone cannot provide educational access to every individual, regardless of the educational expansion and development that have taken place so far. Many societies have therefore become occupied with other types or forms of delivering education, for example, distance education.

The use of distance education mode to meet the pressing educational needs is not a new phenomenon in the Industrialized countries and in some Third World countries. The status and quality of this mode of delivery differ from one country to another, for example, in some countries, distance education and conventional education are recognized as equal partners in the educational system and therefore efforts are made to provide equal or enough resources for each of them. However, in other societies, distance education is viewed as an inferior mode of delivery or simply as a vehicle for repairing some shortcoming of some regular education system (Holmberg, 1987). As a result of this, resources to ensure quality programs in distance education are inadequate.

Still, in other societies, the governments are committed to expanding the provision of distance education, but they are faced with considerable difficulties in

funding such an expansion (Prebble, 1990). However, regardless of such drawbacks regarding the use of distance education to open access to education, many societies seem to be committed to providing opportunities for learning in a way that each individual, willing and capable of participating should not be denied the opportunity to do so.

Challenges of Distance Education in Today's Societies

The nature of learning as envisioned by some writers, for example, Harry (1992) in meeting today's societies' needs may be briefly summarized "as a life long learning and a multi-faceted process" which should focus on learners' specific needs. The assumption here is that individuals "need to continuously learn different information in order to respond quickly to a rapidly changing environment" (p. 162). The learning should therefore be structured to meet these ever changing learners' needs. The conventional education alone can not be expected to fulfill this important role. Other forms of delivery, for example, distance education are considered essential for this task.

Another assumption is that many more learners are developing autonomous study habits (Ljosa 1992). Such learners require more flexible and alternative organization of study programs. Distance education is at the center of such programs because of its flexibility. More programs of this nature will accord to distance education some recognition and familiarity necessary for it to assume a central function within the educational system. More important, for the working people with autonomous study interests, distance education has the potential to combine their work with some vocational and/or professional training. When this happens, work and education may no longer be viewed as separate phenomena, work and educational institution are integrated (Ljosa, 1992). Since many students are seen to develop more autonomous study habits, many people start to embrace distance education as a suitable mode of delivery. And for many societies, distance education is organized in such a way that it is made an intergral part of the education systems and set up.

Role of Distance Education in Today's Societies

Review of literature suggests several roles that distance education should fulfill in today's modern societies (Harry, 1992; Wagner, 1993; Ljosa, 1992). Among the roles are:

- Accessibility for the Educationally Inexperienced. The assumption is that more and more people, youth and adults desire to be educated. This group, especially the working group, requires opportunities to study at convenient times. Distance education holds promise for them.
- Updating and Retraining. Ljosa (1992:25) contends that the need for retraining and updating "concern [all] people regardless of previous education, age, job and social situation." People need education and training that will help them to cope with increasing needs of mastering completely new situations and changes that are taking place in societies. Moreover, changes in the educational system create a gap in education between the school-going people and those in the labor force. As a result, those people who have stayed in the labor force for years need to be updated and retrained. Training and work need therefore to be balanced through distance education (Wagner, 1993). The belief is that distance education has the potential to combine training as far as possible with uninterrupted work. This too brings a closer link between education and work.
- Multi-Competence and Career. The belief here is that in today's societies "people tend to develop competence in more than one field and also change their occupation several times during their life span" (Ljosa, 1992:29). This, they do to meet the challenges of their changing societies and their own aspirations. Normally, this affects the working class who likes to combine work and education. And, since distance education adds flexibility to the education system, it is seen as an optimal way of developing these new competencies and career needed in the working force.

Distance Education in Botswana

Introduction

The government of Botswana is committed to expanding the provision of educational opportunities at all levels of the system. The quantitative growth, particularly the large expansion of enrollments in both primary schools and junior secondary schools has been intensified by the abolition of tuition fees in 1980 (primary) and 1983 (secondary). The situation has been, and is still that there is an enormous unsatisfied demand for senior secondary and tertiary education among secondary school graduates. Those people who are pushed out of the conventional education at all levels of the education system face considerable difficulties trying to find either jobs or some avenues to pursue their educational aspirations. Given these conditions and challenges, it is appropriate that the government of Botswana should look for possibilities of making education accessible to people who cannot be accommodated by the conventional education and/or those who need an alternative to the conventional form of education.

The discussion on an alternative to conventional schooling dates back to the first Botswana Commission on Education. The 1977 Commission on Education demonstrated some awareness for the need for out-of-school education like the provision of distance education. However, to-date, there has been very little or no significant achievements to boast about or worth mentioning as far as distance education is concerned. Development of this sub-section has been next to impossible, since the 1977 Commission's recommendations were deferred "to a proposed white paper on non-formal education [which] was never produced" (Botswana's Commission on Education Report, 1993:15). This sub-section therefore has seriously lacked direction and strategic planning. Consequently, failure to have a comprehensive policy has left this section woefully under-resourced.

There continues to be a lack of a comprehensive concept and development of this sub-section. Particularly, the weakness of this area has been the lack of dedicated infrastructure to provide administration, tutoring and support services for the distance learners (Commission on Education Report, 1993).

Botswana Government Paper No. 2 of 1994 rightly posits that in Botswana, 'out-of-school' education "lacks the status and recognition it usually enjoys in developed and some developing countries" (p.10), owing to the fact that it was left out of the Government Paper No. 1 of 1977. As a result, very few institutions provide distance education. So far, institutions which are known and recognized by many people as providers of distance education are the Department of Non-Formal Education (DNFE) in the Ministry of Education and the Center for Continuing Education of the University of Botswana (CCE).

DNFE enrolls students at Junior Certificate (JC) level and Cambridge Overseas School Certificate (COSC) level. Another provider of courses by distance education mode is the Center for Continuing Education (CCE) of the University of Botswana. CCE offers credit courses leading to 'Certificate in Adult Education'.

Analysis of Education in Botswana reveals that providers of distance education operate parallel to each other (Botswana Government Paper No. 2 of 1994). Generally, there is lack of information sharing.

Principal Mode of Delivery in Botswana

Print-based material is the most common form of course delivery in Botswana. While students normally work alone at their respective homes, there are some organized face-to-face interaction between tutor and learners. Communication between tutor and learners is at times difficult because the postal agencies are not reliable, and in some places the telephone services are not accessible to learners or they are very expensive to use. In other places telephones are not available. It seems that for a number of years, the print will remain the number one medium for delivering distance education in Botswana.

The Proposed Distance Education College of Botswana

The Botswana Government is currently exploring possibilities of establishing a nation-wide distance education college. The urgent and widely recognized need for such an institution comes as a result of the recommendations of the report of the

study sponsored by the Commission on Education, entitled 'Report on a Feasibility Study on the Establishment of a Distance Education College for Botswana' (Commission on Education Report, 1993). This initiative was prompted among other things by the realization that distance education remains underdeveloped, and particularly by the realization that the quantitative development of education has led to "the bottle-neck of restricted senior Secondary education and the limited provision of vocational education and technical training" (Ibid: 17). There is therefore an enormous demand for education at these levels. Distance education is therefore needed to satisfy this demand.

Efforts are being made to create conditions in which satisfactory distance education can be carried out, for example, recently, a national conference on 'Distance Education in Botswana - Strengthening Partnership' was held to address and establish the status and quality of distance education in the country. Although this conference recognized distance education as the best mode to address some of the country's education and training problems, particularly that it is "an economically viable and academically sound alternative channel of providing education at all levels" (Singh, 1979:8), there was some skepticism about its quality and status in Botswana.

The consensus is that current institutional arrangements and resource allocations for distance education are inadequate. Efforts are therefore being made to create conditions both financially and administratively in which satisfactory distance education will be carried out. However, the conference sparked renewed interest in the role that distance education can play to increase access to education.

The discussion and findings of this conference seem to be, in many ways, consistent with and supportive of the 1993 Commission on Education recommendations for the establishment of a nation-wide distance education college. The college is to have the ability and capability to connect with each and every 'Motswana', particularly the disadvantaged and the remotely located potential learners. In this way the contribution made by distance education will be widely felt and embraced by many people. Hopefully, the current scope and status of distance

education will change to the one indicated by Appendix A.

The recommendation of the commission is supported by an analysis of Botswana's current educational system, and, some very sound reasons why such a college is desirable and feasible.

The commission establishes four main categories of potential distance education clientele:

a) Out of school secondary education, for example,

   1) Junior Certificate Seekers - with respect to the junior secondary education for out of school children, like the existing backlog of children who have failed to get into the secondary schools, and those who have dropped out or failed junior secondary school, the college may offer junior certificate level courses. Another important target group for JC level courses are adults who need the junior certificate programs.

   2) Senior Secondary - "O" Level seekers - with respect to out of school education for this level, the commission recommends that comprehensive and extensive "O" Level programs be offered to them. Another target group for this level is the junior certificate holders who cannot get a place in senior secondary school or vocational colleges.

b) Pre-tertiary vocational, professional and management in-service upgrading courses - the target group here is "the employed or the self-employed adults who wish to improve their skills and career prospects by taking pre-tertiary courses" (p. 298). To address this the commission recommends courses primarily aimed at the working adults, and with a view to improving their work skill and career prospects.

c) Post-literacy and Extension Programs - this addresses those who "wish to use their skills to satisfy an immediate need not necessarily linked to a comprehensive curriculum or a qualification" (p. 302), for example, distance learning packages on such topics as basic bookkeeping.

d) University Level Courses - "the commission believes that the Center for

Continuing Education of the University of Botswana should be the lead agency for the development of distance education programs at the tertiary level" (p. 299). The commission believes that the number of people seeking University diploma and degrees "will grow dramatically in the next twenty-five years, as education level rises and qualifications require updating to meet modern requirements" (p.302). Courses therefore should be offered to help employees to keep abreast with the changing needs of their modern sector.

It must be conceded that the immediate establishment of the distance education college is promising. Also, it must be borne in mind that to establish a distance education college of "any size requires planning and substantial resources" (Chick 1990:22). With the need for proper planning and sound policy that will allow resources to flow to this sector, the building of the college might be delayed. As for the type of programs to be offered, I think time and experience will prepare the ground for a more informed debate on the type of provision which could suit the diverse needs of Botswana's wider population.

Providers of Distance Education in Botswana

Department of Non-Formal Education (DNFE)

DNFE was officially launched in 1981, as a single government department with a mandate to provide distance education to those who have been pushed out of the conventional education system, particularly the Junior Certificate and the Cambridge Certificate School leavers (Commission on Education, 1993). So far, DNFE is the largest provider of distance education offering courses leading to junior certificate and to "O" Level. In 1991, the department had registered about "2,135 students at J.C. level and 942 at the Cambridge Overseas School Certificate level" (Ibid. p.15). It offers a wide range of courses.

The principal mode of delivery of all courses is correspondence, i.e., home study print packages and some radio lessons. Diversification, particularly in terms of offering both credit and non-credit courses seems to be a distant goal. However, when this department was launched, it was thought that at one stage it would offer

non credit professional courses (Gaborone et al 1987).

Many factors work against the effectiveness and coverage of DNFE distance education program. The 1993 Commission on Education report identifies four problems:

- severe lack of resources, space, equipment and management information system;
- severely understaffed and also lack of specially trained staff and poor career development possibilities;
- lack of institutional and professional status accorded to the unit; and
- the delivery system and material have not been changed to meet the new clientele, since its clientele has changed from the working adult to out of school young people.

All these problems boil down to one major problem, that of failure to recognize distance education and conventional education as equal partners in the education system.

Center for Continuing Education(CCE)

The University of Botswana through its Center for Continuing Education offers a two year program leading to 'Certificate in Adult Education' through distance education mode of delivery. The program was launched in 1983, having been initiated by the Department of Non-formal Education which needed a professional training program for its employees, the literacy assistants (Mutava, 1989). However, in anticipation of future demand from other agencies and organizations, the program was not designed exclusively for the literacy assistants, "but with a view to provide general knowledge, skills and training to extension workers, and other front line adult educators" (Ibid.:1).

As could be expected, the programs started with twenty-three students, all literacy assistants. So far, four groups have graduated from this program and the fifth cohort of forty two students have just completed their first year, having started

in August 1993. This group, like the second and its preceding group does not comprise only literacy assistants, "students are from various departments and/or organizations such as Prisons, DNFE, University of Botswana, Botswana Defense Force, Brigades" (University of Botswana Annual Report, 1993:8).

Mode of Delivery for CCE

Currently, two dominant modes are used, print and face to face instruction. Problems in the mailing system and the lack of organized study centers in various regions of the country necessitate that printed material be distributed mainly from the center, the University of Botswana. Course materials and assignments are prepared by the CCE and students are expected to collect them during their four week residential period.

The residential periods are organized at the commencement of every academic year. They serve as an orientation session of the Certificate in Adult Education program (CAE) students to the University of Botswana and the CAE program. It is only during this period that many students have access to the University resources, particularly the library. This is the time when the students actually feel and perceive themselves as part of the University and they are expected to utilize their time fully.

The face-to-face component also includes up to six study week-ends a year at designated study centers outside the University of Botswana. These study week-ends are normally organized every two months. From experience, one may say that these centers serve as effective support for students' learning problems. By typically being situated away from routine family, work, and social environment and being placed at the centers, there is some heightened intensity to learning as learners have more time and energy to devote to learning and moreso that learning is their only focus. It is during these study weekends that assignments are collected and marked ones are returned. All courses are credit courses and have a fixed entry point with time limits set for completion. The time limits, especially time for the final examination resemble on campus courses.

Management and Administration of CAE Program

Until recently, both the management and administration of CAE program have been a collaborative venture of the Department of Adult Education (DAE) and Center for Continuing Education (CCE). The CCE has been performing a key coordinating role and tutoring has been mostly done by DAE, a department which was barely coping with its existing responsibilities. Note that the DAE staff are also full time instructors for on campus adult education courses. Their responsibility for on campus courses leaves them with very little time for both administration and tutoring of distance education courses, for example, in 1992/1993 academic year, the administration of CAE program was left to one instructor who has had very little time for this because of the duties he had to perform to DAE.

A frank review of DAE staff involvement in CAE program is provided by Dr. Mutava's (1989) report "Evaluation of CAE Program" which reported that DAE staff are overtaxed, especially that in addition to tutoring, marking assignments, setting and conducting final examinations, DAE staff are expected to travel to different centers. Travelling is normally by road, sometimes using gravel, and this may be very tiring for them to come back on Sunday, and be expected to be ready and perform well the next day.

One other demotivating issue is that although these instructors are severely over taxed, "there is no compensation for working over the weekends and during vacation" (Ibid. p.10). It may be necessary to provide some incentives to these instuctors, for example, monetary ones, in order to motivate them to fulfill their obligation to CAE students. Hopefully, with the coming of CCE as an autonomous wing, trained personnel in such areas as management and administration of distance education will be provided for CAE program.

It was in the 1992/93 academic year that CCE became an autonomous wing devoted primarily to the field of extension and distance education. It is through CCE that the University of Botswana hopes to meet the diverse needs of Batswana which otherwise could not be served by the provision offered by the current programs offered by different faculties (University of Botswana Annual Report 1993:5).

While the CCE is not entering the field of distance education for the first time, its capacity for management, administration, production and distribution of course materials to distance education learners is questionable. The center is still severely crippled in terms of trained personnel. So far, out of the total number of posts in its establishment, "only three members of the staff are in post" (Ibid.:4). If they have been successful in their advertisement for their Founding Director, the Head of Distance Education Unit and the Course Advisor, these vacancies will all be filled up by the 1994/95 academic year. In addition to these already advertised vacancies, the CCE intends to advertise three posts for the course editor, radio producer and clerical officer (University of Botswana Annual Report, 1993). Problems of specialization constitutes barriers for CCE to get readily available personnel especially from within the country.

Notable/Considerable problems with CAE Program

Given the pressure and strains under which both the CAE and CCE staff have been working, it is likely that the CAE program and students have suffered a lot. From the study undertaken by Dr. Mutava (1989), there is some evidence that the CAE program is significantly weakened by the shortage of staff, for example, the CCE has not been able to provide the support service much needed and appreciated by distance learners. Problems of time and distance are seen to constitute these barriers, particularly that technology is still at its infant stage. Except for the study weekends, many students are unable to get in touch with their tutors.

Furthermore, problems of time and shortage of staff are possible contributory factors to the insufficient documentation and evaluation of this program and also to failure to evaluate and/or revise course materials. Dr. Mutava's study has revealed that since 1983, the year the program was launched on an experimental basis, it has never been evaluated. However, it is clear to both the CAE and DAE staff that no research was done prior to its launching to determine students' needs. Worse still, "the materials were designed and prepared under pressure and in great hurry [and] were never subjected to any rigorous pretesting" (Ibid.:6). The pressure came from

the DNFE which needed a professional training program for their literacy assistants. Dr. Mutava's study suggests that much of the benefits of this program will be lost if its progress is not documented and evaluated to allow, for example, for some provisions/modifications or restructuring of the courses. Hopefully, one of the top priority for CCE will be the evaluation of the courses and possible revision of the course materials which have been running since 1983.

DEVELOPMENT OF DISTANCE EDUCATION COURSES

Introduction

Many writers (Kelly, 1990; Baath, 1982; McLaren, Teare, and Schieman, 1993) advocating the use of relevant models or course development guidelines for developing distance courses raise strong arguments for their potential to minimize inappropriateness of courses for the learners. The review of literature itself reveals that important advances have been made in the development of distance education courses that are suitable for the learner, especially in the undergraduate levels. Attempts may have evolved as a consequence of the increasing number of colleges and institutions offering courses or programs by distance mode.

This growing importance and popularity of distance education also necessitates that colleges and institutions offering distance education courses should aim for quality in courses that they develop. Without careful guidelines, the quality and relative merits of distance education courses may be lost. Distance education course development therefore represents a significant undertaking for institutions dealing with distance education.

Kelly (1990) advises that existing course development systems that work well for big institutions "do not necessarily transfer well to smaller scale institutions applications" (p. 52). One implication of this is that, in adopting guidelines that are used in these big institutions, a lot of critical analysis and considerations should be done before they are used.

Further, literature reveals that most courses that are decided upon and developed by individual institutions are often carried out in an "impressionistic

fashion" with the interaction of the tutor and the learner. Holmberg (1993) argues that courses developed in this manner tend to be teacher-centered. In most cases these courses are aimed at leading their "students straight to specific goals . . ., [and] regard each study unit as an integral part and thus as a compulsory course component which is only rarely regarded as replaceable" (Ibid., 52). Writers like Holmberg consider such courses not good for distance education learners.

Writers like McLaren, Teare and Schieman (1992), Holmberg (1982), Kaufman (1984) and Kelly (1990) recommend that course development exercises must be learner centered, especially taking into consideration that in practice, courses developed without due concern for the learners can be inadequate and disastrous. Learner centredness of the exercise here implies among other things that course developers should take into consideration the learners' skills, educational background and reading ability when developing courses. In support of this Egan and McCleary (1989) point out that in developing courses, course developers have to be aware that to some degree distance learners are at a disadvantage because of their limited face-to-face interaction with the tutor. It is therefore important that the structuring of the course should be focused at the learner. All these writers provide valuable philosophies or benchmarks for the development of distance education courses.

Rowland (1993) looks at any design as a means to cross the gap between where we are and where we want to be. This is also true of course development. The development of a new course will therefore involve assessing and closing the gap. The importance of course development guidelines in this matter is emphasized. Baath (1982) contends that "there is nothing as practical as a good model" (p. 37). He therefore recommends that one way institutions could develop distance for the future is through deliberate application of relevant educational models.

Team Approach to Course Development

Recognizing the importance of course development, writers like Rowntree (1981), Miller (1987) and Holmberg and Bakshi (1989) advocate for team approach

to course development. Rowntree maintains that the team approach is mainly adopted in post-secondary education where in some cases the course is taught by a group of people who share and meet regularly once the course is running. Miller's (1987) observation is that the design of courses in some universities is left entirely to the individual person who will be teaching that course. The point he brings out is that teachers may be qualified in their particular subjects but this does not mean that they necessarily have special expertise to develop courses. Many of them have little, if any background in course development. There may be, therefore, problems in asking teachers to develop courses they will be teaching. He too advocates for a team approach.

The view that underlies course development is that development is carried out in an interactive cycle. Development itself is a creative, disciplined and decision-making task. Some writers, for example, Miller (1987), Rowntree (1981), and McLaren, Teare, and Schiemann, (1993) suggest that in order to develop effective courses, the task should involve many people, for example, teachers, subject matter experts, learners and so on. The specialized expertise contributed by each member of the team is crucial in producing excellent courses.

In total support of the team approach to course development, Rowntree (1981) states that in the "open universities, all courses are developed by a team" (p. 12). Teams are favored because of their capability to produce courses of better quality than each member of the team would, when working alone.

The success of the team approach is further attributed to the stimulus of the discussion and the need to satisfy each member. Rowntree emphatically states that "several heads if not always better than one, can at least be relied upon to be more diverse" (p.13). Of more importance is that the team should operate within some clearly defined guidelines so as to maintain a logic, rational and systematic process.

In the study that Holmberg and Bakshi (1989) did, there is indication that variety in the backgrounds and viewpoints of course team members can lead to lack of coherent approach. Furthermore, there is evidence in the literature that a great deal of time and energy can be lost in developing courses if the dynamics of the

group are not supportive and trust-inspiring. In this regard Rowntree (1981) states that,

> team work can reduce itself to the lowest common denominator of each member trying to maximize his influence on how other members tackle their sections while minimizing the influence they can exert on how he tackles his (p.14).

Holmberg and Bakshi's study demonstrates some of the team approach pitfalls, for example, in their study, "authors were frustrated by instructional designers' attempt to oversimplify the course content . . ., conversely, instructional designers accused authors of trying to accomplish too much learning in too little time" (p. 3) By bringing out these pitfalls, these writers do not in any way suggest that they are against the team approach, rather, to help readers understand the process of team approach to course development. Team approach seems to be favored, especially where the course being developed is multi-disciplinary, as many new courses are.

Course Design Features

Many writers have revealed some guidelines that course developers can use to develop distance education courses. One consistent finding (e.g. Posner and Rudnitsky, 1982) is that at the beginning of course development, developers should have something tangible to work with. The presence of course development guidelines may therefore assist in this matter.

Different writers present different areas in which decisions about the development of the course are to be made, for example, the structure and sequence, the course content, assessment and feedback, evaluation, and so on. Rowntree's observation is that the areas or variables to be considered is dependent on the nature and the purpose of the course to be developed.

Further, Rowntree stresses that course development deliberations should be cyclical. Developers should be always going back to areas considered earlier, in order to reassess considerations of another area. As a matter of fact, different course developers will choose different features to begin thinking about when developing the course.

Structure and Sequence

The nature of distance education courses, especially print-based, is that the learner's success is dependent on the design of the course, especially its content and the course materials used. To some degree therefore, the distance learner is at a disadvantage due to limited interaction with the instructor and hence his or her reliance on the course design. Consequently, the sequencing or the design of the course should take into consideration this limitation. One way toward this would be through deliberate applications of sound models or guidelines for course development.

McLaren, Teare and Schieman (1993) suggest that the design and sequence of the course should provide the learner with needed information and resources and guide the learner through the whole learning process. As it can be anticipated, structuring of the course is dictated by the nature and the purpose of the course. In here, we shall consider guidelines for structuring the course that have been provided by Rowntree (1981). He suggests the following guidelines:

1. Pedagogical Structure: Here we are concerned about the mode of delivery, for example, printed course materials. Endorsing the value of this principle, writers like Holmberg and Bakshi (1982), Finkel (1982), Waldron and Moore (1991), in distance education, recommend that course developers have to structure the courses around the individual learner working through the material from which he/she is expected to learn on his/her own. The course materials have to be self-teaching since neither the tutor nor other learners are always around to give the learner help and encouragement. It is therefore important that distance education material should incorporate questions,

exercises and activities that will help the learner to check his/her progress. In addition to this, courses have to include in their structure the regular submission of assignments which are marked by the tutor and send back to the learners.

2. Structure of Events: Here course developers are identifying the structure of the course by considering the course key events or critical happenings, for example, breaks, examination, field trips, and so on. The point raised here is that courses of all kinds have their critical events around which they can be or must be structured. For example, the duration of the course may be predetermined by the conventions recognized within the institution offering that course. Possible starting dates and finishing dates may define the structure of the course. Very often we find that where learners have to sit for examination, course developers find themselves structuring the course around the need to have covered all the major topics before the examination.

3. Structure of Ideas: Since learners can not learn everything at the same time, a course may be structured around the sequence of ideas. Bearing in mind that what is best for one student may not be ideal for another, Rowntree (1981) suggests that course developers should try to come with a sequence that will suit a maximum number of the learners. The following sequences are suggested here:

   i) Topic by Topic: The one big advantage of this is that each team member can take a topic and work on it, not depending on the other members of the team because each topic is more or less independent of the others.

   ii) Chronological Sequence: This may be followed whenever an understanding of one event or stage is dependent on an understanding of a step or one stage that occurred previously.

   iii) Causal Sequence: It applies where cause-and-effect relationships are being taught and where the objective is that learners should establish and explain such a relationship.

iv) Structural Logic: Here we are concerned about sequence dictated by the logical structure of the subject. This is mostly applied where it is clear that a certain topic cannot be learned without prior understanding of another.

v) Problem Centered Sequence: The course is structured around the exploration of an issue or problem.

vi) Spiral Sequence: This is a kind of sequence where learners meet a given concept again and again, each time at a more complex or demanding level.

All these should be done bearing in mind that the direction of the course should be matched to the needs of the learners. This is an important move toward motivating the learners. The sequence of the course is therefore important to the effectiveness of the course.

Assessment and Feedback

Assessment and feedback of the learner should be clearly related to the purpose and objectives of the course. Further, the assessment strategies used should enable the learner to demonstrate the knowledge, skills and attitudes they have acquired or improved upon during the course.

In dealing with the course activities or exercises, Waldron and Moore (1991) contend that course developers should take into consideration Bloom's taxonomy of educational objectives. The practice is that course developers try to accommodate different cognitive levels in structuring the questions, for example, exercises that call for knowledge, comprehension, application, analysis, synthesis and evaluation. Also, it is important that the course developers should include questions that challenge the affective domain. Usually the higher order intellectual activities, those of analysis, synthesis and evaluation are preferred when developing courses for the adult learners.

Jenkins (1987) suggests that when course developers are developing activities or exercises, they should consider presenting activities in a manner that the learners can interact with the text and learn the material better. She further suggests that course developers should bear in mind the following:

- That a good distance teaching text should contain numerous activities aiming to recreate something like the atmosphere of the classroom or tutorial, with question and activities designed to represent a dialogue between teacher and the learner;
- As learners proceed in small steps, they need questions and activities at each new step to encourage them to learn and check on their progress;
- Learning is complete when learners can apply what they have learned in variety of circumstances;
- When designing activities or exercises, guidelines and plenty of examples should be offered, and
- Self-assessment questions are needed and they should be carefully constructed.

Jenkins (1987) believes that self-assessment questions reinforce learner's learning. As many questions of this nature are included, also, correct responses to such questions should be given so that learners can check their progress regularly. Jenkins suggests that more open-ended kind of self-assessment questions encourage the learner to think more independently, to develop their own responses and ideas and to relate what they are learning to their personal experience. What is emphasized is that options should be provided for the distance learner, for example, we should include activities like dialogue journal and breakaway activities (McLaren, Teare and Schieman, 1993).

Deciding on the type of assessment strategies may depend on the assessment system of the institution offering the course. Some institutions emphasize the end-of-course assessment only, for example, final examination. Other institutions use both continuous assessment and the end of course assessment. So strategies shall depend on whether an institution would like to assess work done during the course, and/or at the end of the course.

Guidelines relevant to assessment and feedback include immediacy, frequency and variability. Above all, the important issue is that course development exercise

must be learner-centered and "must adopt an integrated approach in order to accommodate the complete scholarly need of the learner" (McLaren, Teare and Schieman, 1993:61).

Course Content

Finkel (1982) observes that most learners learning at a distance have far less time than full-time learners. It is therefore important that the content of the course should be meaningful, motivating, interesting and provocative so that learners may feel that time is being used effectively. The important issue here is for the course developers to combine information that is academically sound and information that is relevant to the learner's real-world.

Finkel claims that learners will get more involved in the course content if they know that they are expected to analyze it and reach their own conclusions, rather than simply asked to regurgitate the content or apply the author's view. Many distance learners rely on the course content, they may have no access to information beyond the course. It is therefore important that developers should include sufficient facts and information in the course. Of great importance is that developers should match the level of difficulty of text to the reading ability of the learners.

Another important focus to course development is brought by Jenkins (1987) who suggests that developers need to decide on the order of their content, for example, Is it simple material before the complex? Is it easy material before the difficult?, Is it basic material before the advanced? and so forth. The important point made here is that if the unit has a good structure, the learners will have less difficulty in learning the content.

Another matter to be taken into consideration in selecting the content is the choice of textbooks and the availability of other reference materials. Always, the learners attention has to be drawn to what is important in the material so that they find their way easily through the text.

Conclusion

From the literature, there is convincing evidence that guidelines for developing distance education courses will be a powerful instrument to distance education course success. However, while the relevance and rectitude of existing guidelines for developing courses are indisputable, their educationally applicability to every specific distance education situation should be critically examined.

Kelly (1990) advises that "existing systems for course development work well for the environment in which they operate and do not necessary transfer well to smaller scale institutional applications" (p.79). Nevertheless, they can "very effectively serve as benchmarks to guide the planning, development ...and evaluation of distance education..." (Wagner 1993:27) especially when modified to suit the situation. In other words, guidelines may be applicable to distance education course development but can not be applied smoothly and appropriately to all distance education courses. The results of this study should provide guidelines which may be critically modified and applied to Botswana distance education course development activities.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter presents the description of the sample for this study as well as the specific instruments and procedures used to collect and analyze the data. Also, the chapter describes steps taken to construct both the interview guide and the questionnaire. Finally, this chapter briefly outlines how the research was guided, for example, by addressing the perceived ethical concerns or considerations as well as the design of the study.

Design of the study

This study, "Guidelines For Developing Distance Education Courses" focused on the experiences of developing distance education courses from the perspectives of selected distance education course developers in the Province of Alberta. The study asked the question," What course development guidelines are used by selected Alberta distance education course developers, and how are these guided by theoretical formulations?" Because of the nature of this research question, the intent of the study and a small sample of distance education course developers in Alberta, an in-depth systematic reflection of experiences was deemed appropriate.

To gather pertinent data, a questionnaire and a semi-structured interview guide were used. The questionnaire survey was the primary instrument for data collection whereas the semi-structured interview provided supplementary and complementary data, particularly for data validation and triangulation purposes. These two interactive techniques were sensibly and carefully matched to the research question and purposes.

The construction of both the interview guide and the questionnaire was guided by the researched literature on course development issues in distance education. The steps taken to develop and administer these are discussed in this chapter, under

the heading "Instruments and Procedures."

Another important factor is the small sample of the study. The purposive sampling was used because the population of course developers in Alberta was not large, hence the research findings are not directly generalizable to other populations of distance education course developers. Sampling is discussed in detail under the heading "Sampling Selection" in this chapter.

In order to increase the efficiency of exploring the guidelines that are used in developing distance education courses, a face to face interview technique was used. In addition to providing physical contact with course developers, this opportunity allowed the researcher to talk to course developers, examine some course content and technology used. This visit also helped to maximize questionnaires' return.

Questionnaire and interview data were presented, interpreted and analyzed with respect to the guidelines of importance. Analysis and interpretation of these data are presented in tables, figures and descriptive forms in chapter four of this study and these are briefly discussed under the heading "Data Analysis" in this chapter.

Theoretical Framework

The conceptual framework for this study has been developed from the researched literature particularly from those authors who provide valuable philosophies or benchmarks for the development of distance education courses, (Egan and McLeary 1989; Baath 1982; McLaren, Teare and Schieman 1993; Kelly 1990; Rowntree 1981; Posner and Rudnitsky 1982; Holmberg 1982 and Kaufman 1984). For many authors, the use of guidelines for developing distance education courses may help course developers to develop quality courses that are appropriate for the learners. Equally important is the study undertaken by Dr. Mutava (1989) which indicate that without careful guidelines, the quality and relative merits of distance education courses are lost.

However, writers differ as to different areas which decisions about the development of the course are to be made. Figure 1 outlines general areas

(generated by literature) that may be considered when developing distance education courses.

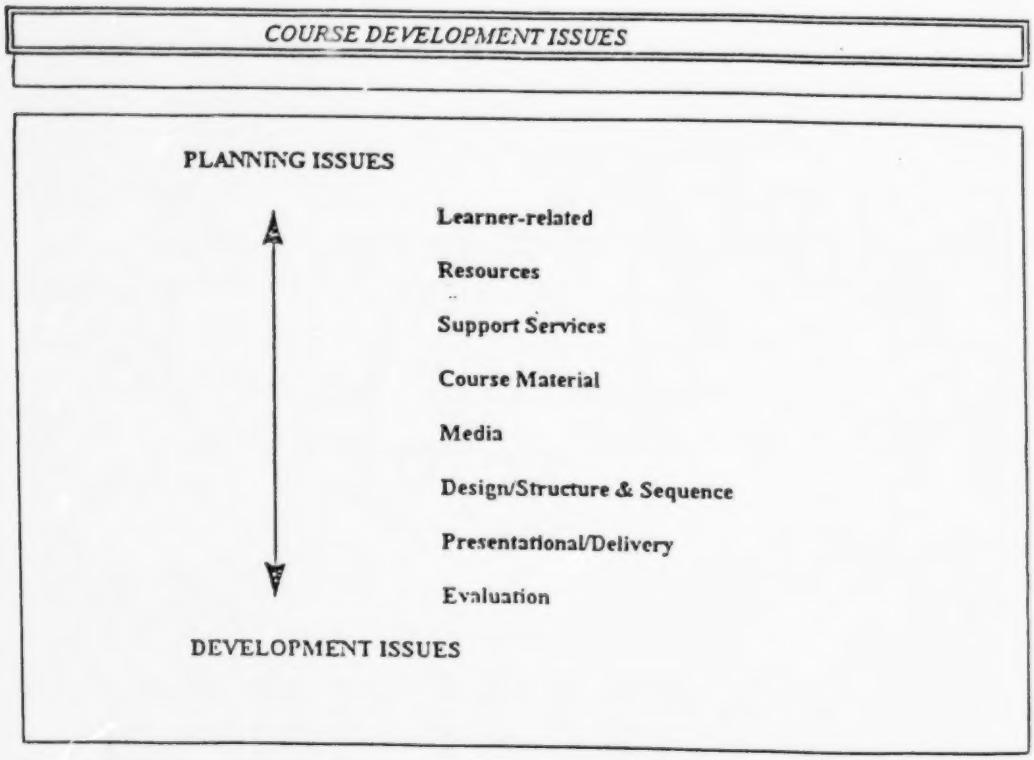

Figure 1

Instruments and Procedures

Gaining Access

Initially, access was sought by obtaining a mailing list which provided the names, addresses and postal codes of course coordinators, head of distance education units and institutions in the Province of Alberta which offer courses through distance education mode. A letter was therefore written to these contact persons, making the researcher known to them, explaining the study's purpose, outlining their needed contribution and the ethical responsibility of the researcher.

Above all these reasons, the letter was written to solicit approval, support, cooperation and involvement in this study. Tension arose when after two months only one institution had responded, positively. The rest did not respond.

Writing letters to the contact persons was only the first step to gain access which was not quite successful. Due to time constraints, contact persons were contacted by phone. After talking to each individual and explictly stating the purpose of the study, the researcher was confident and happy that approval had been granted and that a suitable participation for the study had been secured to ensure a credible study.

To solicit consent from people being researched, another letter (Appendix D) was written to potential participants explaining "the purpose of the study, who has supported it, how the data will be analyzed, as well as the role of participants and the ethical obligations guiding the study" (Wilson 1992:185). Participants were asked to indicate their willingness to participate in this study by completing the questionnaire.

Selection of sample, particularly interviewees, was in line with Collaizzi's (1978) guidelines. Therefore, "experience in the investigated topic and articulateness [sufficed] as criteria" for selection of the participants (p.58). Interviewees were therefore course developers who had completed the questionnaires and who were recommended by the contact person. In many instances, the contact person was the head of the unit or the coordinator of course development issues. The data are presented in Chapter Four of this study.

Sample Selection

The sampling strategies for this research were guided by theoretical principles, for example, ideas from Collaizzi (1978) and Borg, Gall and Gall (1993). The sample consisted of thirty participants drawn from a population of distance education course developers in some institutions delivering distance education courses in the Province of Alberta. A very simple and ethical procedure, a voluntary one, was used in this study in that participants were invited to participate

voluntarily. Invitation to participate was by a letter, stating clearly the criteria for participation and the nature of data the researcher was looking for.

With regard to the criteria used for selecting the participants, it was essential that the course development staff not only had been involved in the area of course development at a theoretical level but also that they had been involved in the practical level of developing distance education course. This practical experience was of significance to the study since it was experience that enabled them to articulate or reflect on guidelines that they have utilized. Also, it helped them to respond appropriately to interview questions.

Participants indicated their willingness to participate in this study by completing and returning the questionnaires that accompanied the invitation. Most of the uncompleted ones were returned, with very sound reasons for their returns, for example, one of the notes that accompanied the returned questionnaire read like this;

> I have distributed seven to appropriate people. I am returning the rest to you. Thank you very much for this opportunity to share my experience and expertise.

Participants in this study were a volunteer sample of distance education course developers from eleven institutions delivering some courses through distance education mode, in the Province of Alberta. The use of a voluntary sample is justifiable and subject to the limitation that "the results from the use of volunteer subjects might not be directly generalized to target population containing seemingly similar but non volunteer individuals or groups" (Hittleman and Simon 1992:114). Also, this type of sampling helped to minimize biases in the way participants were obtained.

No information was collected about participants demographic characteristics, for example, their age, gender and ethnicity. The researcher was interested in their experiences, which varied between three years to thirty years. Participants of this nature therefore made the researcher comfortable that the

necessary data to answer the research question had been provided.

The sample for the interview was drawn from participants who had completed the questionnaire. Since the researcher could not interview all the volunteers, an attempt was made to select those participants who were able to articulate well and freely their experiences. For this purpose, a purposeful sampling was used. Like the use of volunteers, purposeful sampling "is used as a strategy when one wants ... to understand about certain select cases without needing to generalize to all cases" (Patton 1980:100).

The researcher solicited from the contact persons, mainly those who are in charge of distance education course development issues, names of people willing to be interviewed. Then, being guided by Collaizzi's (1978) ideas, respondents to the interview were selected. Interviewees were therefore seven experienced distance education course developers from four institutions.

Instruments

Two instruments, a questionnaire and an interview guide were developed to gather relevant and pertinent data for this study. These two instruments, in addition to complementing each other and thereby ensuring freedom from bias, have strengthened the stability of the result of this study. Furthermore, these interactive techniques have demonstrated compatibility with the research purposes and the research question. The steps taken to develop and administer each instrument are described below.

Questionnaire

A questionnaire was designed to explore guidelines that are used in developing distance education courses by some selected institutions in the Province of Alberta. The questionnaire was selected as the main instrument of data collection because of its efficiency and economy in data collection. Of great importance is that it provides "a level of anonymity that no other technique allows [and] this can encourage individuals to answer questions they might otherwise not answer for fear

of retribution" (Dixon, 1990:207).

A number of procedures and guides were followed during the construction of this questionnaire. Particularly, the construction and format of this questionnaire have been guided by other studies which have utilized the Likert Scale and by the researched literature (Nachmais and Nachmias, 1987; Moser and Kalton, 1971; Richardson, 1989; McIntosh, 1994; and Pawlack, 1992).

Similarly, for this study, a five-point Likert scale with responses relating to the importance of each item was used. The content of the questionnaire was guided by ideas from researched literature (Overgaard, 1990; Waldron and Moore, 1990; Kelly, 1990; Schieman, 1990; Jenkins, 1987; Rowntree, 1981; Ljosa, 1992). The questionnaire consisted of sets of questions carefully worded and arranged into five categories, namely: Learner Characteristics, Resources; Presentational Characteristics; 'Pattern' of Development and Evaluation Plan. Almost all items in each category employed the use of the Likert Scale ranging from 5-representing a high level of importance to 1- representing a very low level of importance. In all, the respondents were asked to rate seventy items. The questionnaires were assigned identification numbers according to each participating institution.

Validation of Questionnaires

Prior to the questionnaire's distribution, the validity of this instrument was assessed by testing it on eight people who have in one way or the other been involved in the development of distance education courses. The eight people were invited to critique the questionnaire, to determine whether or not the questions were consistent with course development guidelines. They were asked to determine the content and the length of each item as well of its appropriateness as a measure of guidelines used in developing distance education course.

The test indicated a need to shorten the questionnaire and rephrase some questions. The overall content of the questionnaire was reported satisfactory, probably as the researcher was available for some clarifications and comments. However, as the researcher went over and over the questionnaire, certain questions

popped up and other defects showed up, the researcher then made some necessary adjustments, especially those suggested by the respondents and submitted the questionnaire to the thesis advisor for final acceptance and submission to the Department of Education Policy Studies ethics committee for final approval.

Mailing and Return of the Questionnaires

The first mailing of the questionnaires was in October 1994. Accompanying the questionnaires were two letters. One letter was addressed to the contact person who was charged with the distribution of the questionnaire. And in each questionnaire a letter to the participant was enclosed. Also, a self-addressed and stamped envelope was enclosed.

The total number of questionnaires the researcher initially distributed to eleven institutions in the Province of Alberta, offering some courses through distance education mode, was sixty-five. Twenty uncompleted questionnaires were sent back since the researcher had sent more copies than were needed. Therefore the actual number of questionnaires that the researcher could have sent out to potential respondents was forty-five. Thirty of these questionnaires were completed and returned to the researcher while fifteen of them were never returned. The return rate was therefore 66.7%.

The profile of responses below indicates the distribution and return of the questionnaires.

Table 1:Profile of Respondents

	QUESTIONNAIRES			
Institutions	Distributed	Returned: Uncompleted	Returned: Completed	Unreturned
001	15	8	7	0
002	6	4	2	0
003	3	0	1	2
004	3	1	1	1
005	3	1	1	1
006	15	2	12	1
007	3	2	1	0
008	3	2	1	0
009	10	0	2	8
010	3	0	2	1
011	1	0	0	1
TOTAL	65	20	30	15

Follow-up Strategies

Two follow-up strategies were used to maximize the return of the questionnaires. Two weeks after the deadline established for the return of the questionnaire, the researcher visited some institutions. Although the main purpose for the visit was to collect interview data, respondents were reminded of the importance and urgent need of their returned completed questionnaires. The high percentage of completed questionnaires was partially due to this physical contact. The contact person in each institution must also be acknowledged as a significant factor in the high response rate of the questionnaires.

The second strategy was a general reminder letter (Appendix E) which was written after the interviews were conducted, requesting the respondents to return the questionnaires, particularly completed ones, though the researcher also needed the uncompleted ones for her records. This follow-up involved some telephone calls. After the reminder letter and some few telephone calls, no further attempts were made to get back the remaining questionnaires.

Interviews

While the main instrument for data collection was the questionnaire, the interview guide was developed to collect data which was used to complement the questionnaire-based data as well as to provide some degree of triangulation for the study.

A number of procedures were followed during both the development of the semi-structured interview guide and the process of interviewing. Of great importance here were ideas from Dixon (1990) which guided the format of the interview guide. The content of the interview was closely modeled on the questionnaire to help establish the validity of the responses. The interview questions therefore addressed the following aspects; Potential learners, Design or Structure and Sequence of Courses, Resources needed to facilitate both the development and delivery of distance education courses, common media utilized in distance education and the support services needed. The interview guide (Appendix F) sheds light on the kind of questions asked.

In recognition of their enhancing or complementary role to the main instrument of data collection, interviews were limited to seven respondents selected from the questionnaires' respondents. Dixon has advised that since the purpose of the interview is to obtain an in-depth understanding from a small group, the respondents should be selected on the basis of their ability to contribute to the understanding of the topic.

Prior to interviewing, the researcher contacted the potential respondents by telephone. Following a confirmation, a date was set for the interview. The interview was conducted on one-to-one basis at a place mutually agreed upon between the interviewer and the interviewee, for example, offices and interviewee's place. All but one interview were on a face-to-face basis. Because of time constraints, one interviewee was interviewed by telephone. All interviews were tape-recorded.

At the time of the interview session, the researcher's consideration was mainly focused on "reciprocity and sensitivity to the other person's time constraints" (Silverman, Spirduso and Locke, 1987). To take care of this, the interview guide

was shown, discussed with interviewees and became the basis for the interview. In this way, comments, clarifications, suggestions and modifications of some questions were attended to before the recording. Responding to interview questions and recording were therefore easy and fast, especially that respondents were well informed about the topic since they had previously completed the questionnaires. Questions were semi-structured and open-ended.

Following each interview session, cueing notes were taken, for example, on the ease of interaction, non-verbal communication and the subjective impression of the interview. For example, following one interview, the researcher recorded

> To have given up on her could have been a grievous mistake. The person sure knows her area. Talk about experience, confidence and good expressions, she has them all.

This interview took place after two unsuccessful meetings were arranged. Dixon (1990) encourages note-taking technique and views it as the most useful recording technique. Data from the interviewees were recorded. All gave the researcher permission to do so.

Ethical Considerations

In this study, particular attention was given to consent, confidentiality and anonymity of respondents. These sources (Devereux and Hoddinott, 1994 and Reed and Sork, 1990) guided these obligations. Further, the study was conducted in conformity with the ethical guidelines or procedures of the Department of Educational Policy Studies.

All the potential participants were invited to take part in this study on a voluntary basis. Although they were not asked for written consent, respondents were sufficiently informed about the purpose of the study, their role as participants and that their return of the completed questionnaires indicated willingness to participate.

As for confidentiality and anonymity purposes, respondents were not asked to disclose their names or names of institutions they are working for. Codes used to identify data sources were only known to the researcher. The codes were used to facilitate follow-up procedures in situations where individuals had not responded to the questionnaires. Although presentation and analysis of the data is in part in words of the respondents, specification of respondents, like identifying their names was avoided to ensure confidentiality and anonymity.

Data Analysis

Analysis and reflections on data were carried in a descriptive manner. In particular, percentage frequency distributions and other descriptive statistics were used.

Response data from the questionnaire were converted into figures and percentages, based on the five categories or themes explored by the questionnaire. To help maintain a high consistency of themes and greater focus, analysis of the interview data was allowed to emerge through the voice of the participants into topics which the researcher was able to relate to and correlate with the five main categories or emergent themes from the questionnaire. This was a way of cross-checking data hence rendering the data credible.

Analysis of interview data involved listening to the recorded data over several times. To facilitate this, recorded tapes were assigned codes, a code for each institution. Collaizzi (1978) provided some insights into this analysis.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND FINDINGS OF THE STUDY

Introduction

The major purpose of this study was to explore guidelines utilized by selected distance education course developers in some institutions in the Province of Alberta. This chapter therefore presents, describes and analyses the research data which were collected from thirty distance education course developers. When identifying the significant points and interpreting them, the researcher was guided by the research question. "What course development guidelines are utilized by selected Alberta distance education course developers and how are these facilitated by theoretical formulations?"

The nature of the research question has led the researcher to utilize a five-point rating scale, ranging from 1 - indicating that an item is of no importance to 5 - indicating that an item is of great importance in the development and delivery of distance education courses. The items that were usefully subjected to the kind of analysis presented in this chapter are those that the respondents rated high, 4-of moderate importance and 5-of great importance. The fact that they were rated high shows a high preference for them, and possibly an indication that without considering these guidelines, course developers run the risk of developing unattractive or ineffective courses.

To make data presentation and analysis more meaningful, the result of the two ratings were blended, and their combined percentages were reported. Therefore, the data remarked upon in this chapter include those derived from the questionnaire survey supplemented and complemented by interviews and discussions with the participating course developers. The richness of the interview data has enabled the researcher to present some verbatim examples.

Some data included in this chapter, particularly those that were rated low, for example, 2 and 1, indicating of little importance and of no importance, respectively, have not been thoroughly commented on but have been included for information they

might provide for further understanding of the data. Reasonably, the researcher assumes that these items are of little significance to the relative merits of distance education courses, especially that responses depended among other things heavily on the understanding and the value of the item. However, in acknowledging a considerable point that these items have a "telling story" too, Table 2, page 84, showing all the items and their responses, is presented in this chapter.

Presentation and Interpretation of Data

The data are analyzed according to both procedures outlined above. In addition, the response data from the questionnaires are converted into percentages based on the five categories explored by the questionnaire. Figures showing the percentage response by category are then presented to describe data relevant to the significant findings.

For ease of interpretation, findings have been presented for each of the five categories explored by both the questionnaire survey and the interview questions. Analysis of the interview data emerged into topics which have been related and correlated with the five emergent themes from the questionnaire. The richness of the interview data has therefore enabled the researcher to describe and discuss the figures in detail.

Potential Learners

In this category, the researcher investigated guidelines that are used by distance education course developers to ensure appropriateness of the course for the targeted learner population. In all, nine items/guidelines were explored in this category, namely; age of the targeted learners (Item 1.1.1), their educational level (Item 1.1.2), their entry level skills (Item 1.1.3), their socio-economic background (Item 1.1.4), their professional background (Item 1.1.5), their educational needs (Item 1.1.6) their personal interests (Item 1.1.7), the degree to which they are geographically dispersed (Item 1.1.8), and their access to technology (Item 1.1.9). Figure 2 presents responses relating to the importance of items in this category.

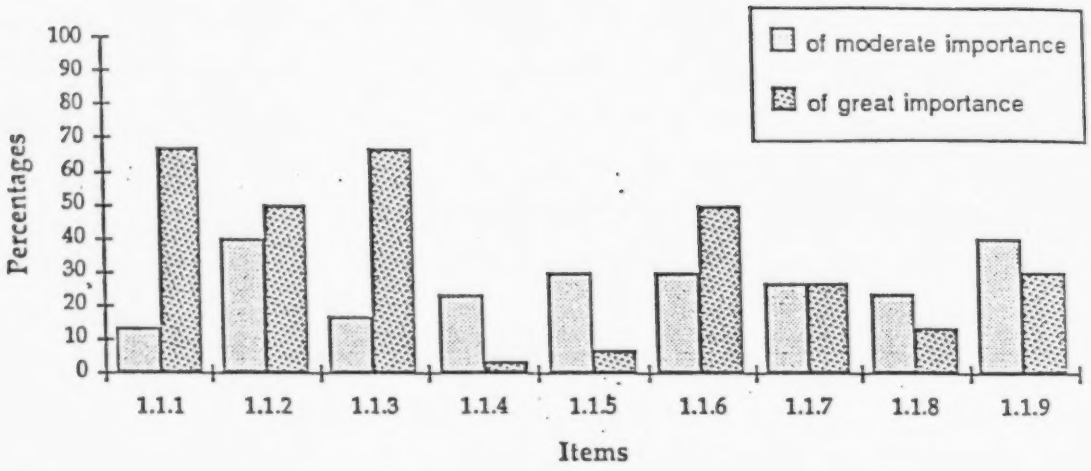

Figure 2: Potential Learners

Data show a range of responses indicating that no one set of guidelines can be applied to all situations. Nevertheless, the data reveal the greatest degree of favorable responses to items 1.1.1. (age) and item 1.1.3 (entry level skills). It should also be noted that these two items (1.1.1 and 1.1.3) are rated as equally important (67%).

Note also that, these two items entertain a point of considerable interest that maturity (age) and skills are the key characteristics contributing to the dedication and to potential success of distance education learners. This has been stated by many respondents, for example, one respondent asserts that,

> **"mature students with previous education and other responsibilities and commitment are more dedicated and goal oriented in their studies as compared to 18 years fresh students"**

Many respondents used the word "mature" as synonymous with "older age." Different reasons are given for the need to consider the age/maturity of the potential learners and their entry level skills when courses are being developed. These two variables are related to success in distance education.

Generally, respondents characterized mature students as students who are extremely motivated to succeed, self-directing or self-guiding, have autonomous learning capabilities and have some educational and/or career goals. Further, motivation, particularly intrinsic motivation is considered the key word to success. With these characteristics, it is not surprising to find that some respondents feel that enrolling for courses should be fairly flexible in as far as the pre-requisite for a course is concerned. For example, some respondents feel that if students "have experience, knowledge that they have gained on the job and have some reasons to believe that they will be able to handle the course [then] they should be allowed to do so on a simple individual basis." However, where students are required to have some special skills, like those of using a computer, respondents feel that students should not be allowed to pursue the course until being helped to have the necessary skills.

A related issue to students' success is how well the course meets the students needs. Respondents feel that, for example, "no matter how good a program /course is, if the students don't see it as meeting their needs, they probably won't persist or do well." Basically, the interpretation of data here reveals the fundamental point that both the nature of the course, particularly characteristics of the course delivery system (flexible, self-paced, friendly, easy to understand, having "alternative learning pathways") and the characteristics of the learners, (for example, self-motivating, self guiding) are complementary and lead to student's and/or courses' success.

The results here is comparable with the work of McLaren, Teare and Schieman (1993) and Egan and McCleary (1989) who contend that distance learners' success is dependent on the design of the course, particularly its content and the course materials used. The point being emphasized here is that the design of the course should provide the learner with needed information and resources, and guide the learner through the whole learning process. Another point emphasized here is that course developers have to be aware that to some degree distance learners are at a disadvantage because of their limited face-to-face interaction with the teacher.

Media

Media here is used to refer to the various forms of distance course delivery strategies and/or various methods of instruction employed in complementary and supportive roles in the delivery of distance education courses.

In this section, the researcher investigated guidelines which are used by course developers to establish the appropriateness of the media for the delivery of the course. Figure 3 shows the observed results when respondents were asked to indicate the importance of matching media to the objectives of the course (Item 2.1.1), ensuring that the subject matter is easily translated into the media (Item 2.1.2), ensuring that learners have access to the media (item 2.1.3), ensuring that the time to access the media is convenient to the learners (Item 2.1.4), ensuring that cost of the media can be afforded by all (Item 2.1.5), that both the instructors and the learners are comfortable in using the media (Item 2.1.6) and that where necessary and possible, more than one media should be employed (Item 2.1.7).

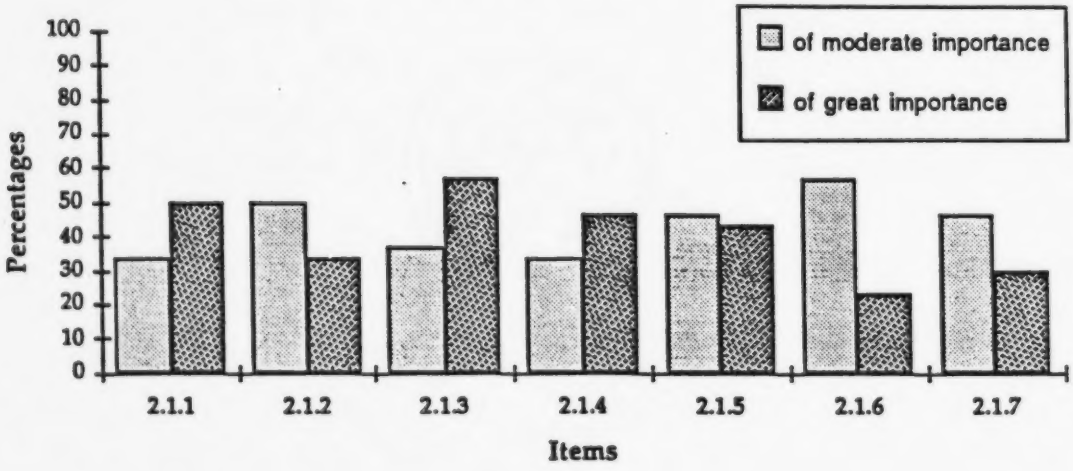

Figure 3: Media

Figure 3 indicates that large proposition of respondents feel that media is an essential course component of course development and course delivery issues. Therefore the respondents advise that in developing courses there is need for course developers to see to it that there is variety of resources/media to support the course. Course developers embrace various media for various reasons, for example, they believe that media have the potential to greatly enhance learning, to increase motivation, make students feel empowered and perhaps cater to a preferred learning style. The importance of using more than one medium (Item 2.1.1) is rated 79% (48%-moderate importance+31%-great importance). Respondents state that choice of media is determined by many variables. Cost is the main factor. For example, one respondent states that

> If media support includes that already available, e.g. VCR, TV, PC, Newspapers, etc., and in place in the home, then we use it. If the students must be supplied with the lab equipment, ... then cost prohibits its supply.

Access to and flexibility of the media are also considered of key importance, 93% (37%-moderate importance + 57%-great importance) when choosing media to enhance or support course delivery. Further, the respondents recommend that the media should be made available to students at a time convenient to them (80%, 33%-moderate importance + 47%-great importance).

Also, respondents see the need to consider the effectiveness of the media in relation of their potential to fulfill the objectives of the course (83%, 33%-moderate importance + 50%-great importance). Respondents feel that the rightful purpose of media should be to augment instruction in order to make learning meaningful and provide a broad range of options needed in distance. The core of their discussion is that the substance of the course material is much more important than media used. The general concern from respondents is consistent with Ljosa's (1992) concern that technology alone is not the answer to successful delivery of distance

education courses.

The types of media/technology preferred and currently used by the institutions surveyed are presented under the section "Technology."

Technology

Figure 4 shows the observed respondents' response when they were asked to rate the importance of the following technologies used in the delivery of distance education courses; print (Item 2.4.1), audio-tape (item 2.4.2) radio (Item 2.4.3), videotape (Item 2.4.4), teleconferencing (Item 2.4.5), electronic mail (Item 2.4.6) and computers (Item 2.4.7).

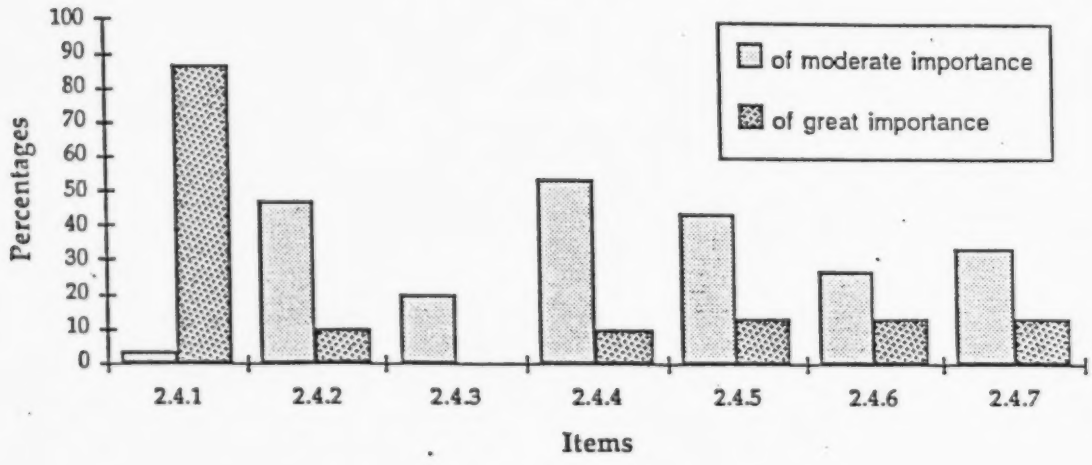

Figure 4: Technologies

It is a widespread practice that many courses delivered both by the conventional and non-conventional education mode utilize print materials. In this study too, data reveal a strong preference or high importance of printed materials in the delivery of distance education courses. Overall, a very high percentage, 100%

(3.7% - moderate importance + 96.3% great importance) is recorded for print.

Print assumes great importance in the delivery of distance education courses because of its effectiveness. Respondents place emphasis on its durability, inexpensiveness, retrievable and replaceable. Further respondents assert that print is subject to few break-downs. It is reliable, and can deliver information in large quantities. This adherence to print is also enhanced by the respondents' experiences that "when all else fails (other technologies), print will be there."

Given the importance of print, respondents feel that other visual and auditory technologies, for example, audio-tapes (65%), videotapes (73%), teleconferencing (65%) and computers (56%) are supplemental and are more important and useful in some courses than in other.

Furthermore, respondents also believe that technology holds a good deal of promise for the future in the delivery of distance education courses. Among other advantages, some technologies are embraced by the respondents because they give to distance education a communication mechanism that break the barrier of communication, for example, it allows for immediate response. Also, technology is capable of making delivery more user-friendly and can assure equitable access of all the students. Emphasis here is on the need to prepare both the learners and tutors to use the new technology because without this knowledge, they are unable to take full advantages of the technology.

The general impression the researcher gets from the data is that print has been around in Alberta for many years and it remains the number one medium of delivering distance education courses for many institutions. However, the concern expressed by some respondents is that "our current love affair with technology sometimes blinds us to the fact that print can do things better and more cheaply." This concern is consistent with the attitudes expressed by Harry (1992), who asserts that the unavailability of certain types of technology is not a handicap as far as the delivery of distance education is concerned. Of great importance is that technology should always be considered in relation to pedagogical concerns.

In support of Harry's ideas, Murray (1990) and Wagner (1990) contend that technology for technology's sake should not be accepted in the field of distance education. They strongly advise that technology should not supercede interests in the instructional application for which the technology is being used. Murray, for example, believes that for technology to be effectively utilized, educators must consider its use in relation to educational objectives and the appropriate forms of instruction.

A significant point is also noted by Wagner (1990) who has observed that educational technologies embody an odd dichotomy. While

> on one hand the education professions are forging ahead with the intergration of technologies, ostensibly to bring about changes in the teaching/learning effeciency . . . At the same time, technologies themselves are increasingly positioned . . . as tools with little attention paid to their catalytic role in bringing about systematic change (pp. 55-56).

It is for these reasons that many writers advise that there is need for distance educators to be more careful, accountable and effective when selecting and using technologies for instructional delivery purposes. After all, they assert, technology remains a tool not an end.

Support Services

Support services play an importance role in the development and delivery of distance education courses. Therefore in this section, the researcher was interested in the type of support services that best serve the development and delivery of distance education courses. The support services explored here are funds (Item 2.2.1), support staff (Item 2.2.2) academic teaching staff (Item 2.2.3), student service unit (Item 2.2.4), library facilities (Item 2.2.5), learning centers (Item 2.2.6), test

centers (Ittem 2.2.8) and program counseling unit (Item 2.2.9). Figure 5 shows the observed results, when respondents were asked to indicate the importance of these items.

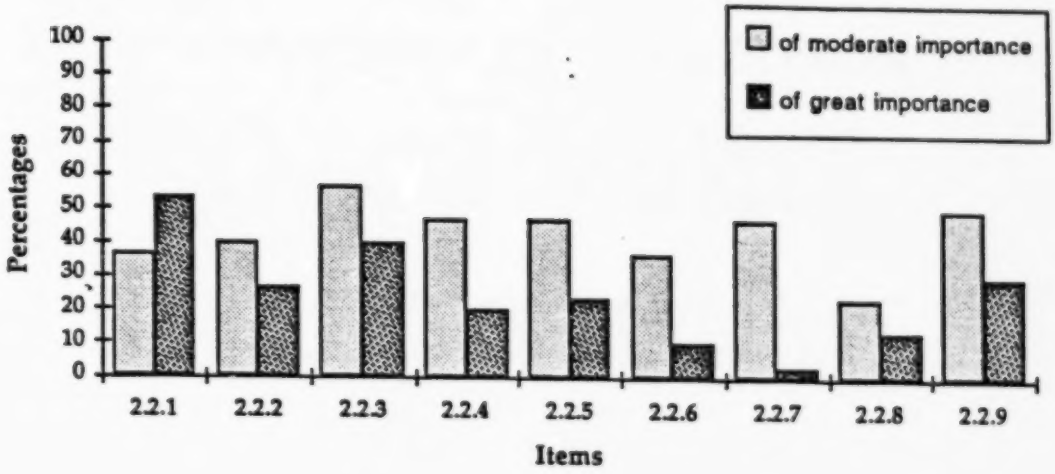

Figure 5: Support Services

The result of the data shown in figure 5 confirm a crucial point that a distance education course can be developed and delivered when sufficient funding is available. Substantively, the data reveal high percentages, 93% (38%-moderate importance + 55%-great importance) of the need for adequate funding for distance education courses.

Respondents feel that "the two most important support services for distance education are funding and academic staff." The need for academic teaching staff

enjoys a high importance of 97% (57% - moderate importance + 40% great importance). The staff is needed for various reasons, for example, to plan and manage the courses, to produce and up-date course materials and other tasks that the institution may deem necessary. In many instances, respondents indicate that academic staff are very vital as human support.

And, although respondents acknowledge that there are some technologies which enhance communication between instructor and students, they believe that in all sorts of communication systems, there is always a certain distance built into them. What the students need is human support and both the students and instructors should be given opportunities to initiate contact, for example, if instructors notice that the students are inactive, they have to find out why, or if the instructors want to inform students about their progress or to keep the students motivated and active, they should be able to so.

The point reiterated by respondents is that the students need to "feel that they are working with real persons" who are sensitive to their needs and problems. A particularly clear illustrative example for the need for human support is an incident stated by one respondent where the student phoned and when she could not find the instructor in her office, left the message in an answering machine, "Is there anyone there? Are there any human beings....? I keep getting buzzing machines and computers. I want a human being." The single most important thing emphasized in this aspect of communication is rapid access. The majority of respondents are in favor of telephones and other means of clearing students problems quickly and overcoming the isolation feeling they may have.

In addition to the support given by the instructors, the importance of program counseling is also emphasized. The results in Figure 5 indicate that a high importance of 80% (50% - moderate importance + 30% - great importance) is attached to program counseling. Respondents see the need to have people available to advice, counsel, socialize, etc., throughout students' involvement with the institutions.

Respondents' perception of the need for tutoring and counselling services concurs with Carr's (1990) and Keough's (1990) observation. These writers stress the importance of human support. Carr however warns that these interactive activities can cost a lot more money than students' independence.

Access to technological services, for example, E-mail, telephone, facsimile is also emphasized. In agreement with Kelly's (1990) observation, respondents feel that with these technologies there can be faster handling of administrative and academic queries or problems from the students and even faster submission and return of student's assignment.

Figure 5 further shows that there is a slight difference between the importance of Item 2.2.6 - learning centers (50%) and Item 2.2.7 - group support services for students who prefer group learning (52%). Few respondents have placed emphasis on the importance of the learning center 50% (39% - moderate importance + 11% - great importance). A further number of respondents indicate that it is important to organize group support services for students who prefer group learning (52%). The low preference towards the need for these items is not surprising, particularly that respondents have placed emphasis on technologies especially those that enable them to break down the barriers of distance, for example, video teleconferencing and computers conferencing. For example, some respondents feel that with the network system they can link any one computer to any one side, and this will allow for sharing of ideas, experiences and tutorial work.

However, with reference to the library facilities, 75% (59% - moderate importance + 25% - great importance) indicating the importance of adequate library facilities is recorded. The respondents feel that students should have easy access to the library materials.

On the basis of these findings, it is clear that a particular type of infrastructure is necessary in order to make possible the effective development and delivery of distance education as well as to offer to students the support they need. Consistent with the findings of this study, Schieman (1990) recommends some types

of teaching and service units which when integrated into a functioning whole may form an infrastructure for distance education. These include the academic teaching staff, education service unit, production unit, students service unit, technical service unit, mailing/dispatching unit and postal facilities. Learners should be made aware of these services. Writers who support the availability of these services, for example, Simpson (1992) rightly state that knowing about these services can make learners feel better to ask for them and utilize them, and perhaps complain when they do not get them.

Course Materials

In this section, guidelines which may be used in establishing the availability and suitability of course materials are explored. To determine their perceived importance, the following items were considered, the importance of course materials in supporting course objectives (Item 2.3.1), the need for course material to be free from gender bias (Item 2.3.2), the need for course materials to be free from racial bias (Item 2.3.3) the need for course materials to be free from ethnic bias (Item 2.3.4), materials to match students' reading abilities (Item 2.3.5), material to be within students reach (Item 2.3.6) and that learners should afford the cost of the course materials (Item 2.3.7). Figure 6 shows the observed responses.

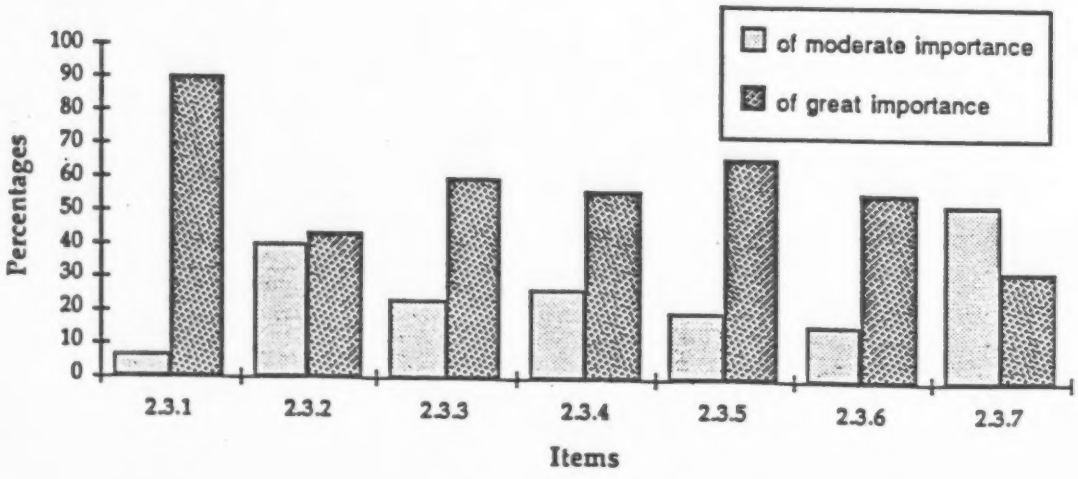

Figure 6: Course Material

An impression formed by the result of the questionnaire data (figure 6) and confirmed unanimously by the interview data is that course developers or writers have to write to established objectives. Therefore in order of perceived importance, item 2.3.1 - Materials to support course objectives drew the greatest degree of importance, 97% (approximately 7% - moderate importance + 90% - great importance). However, respondents caution that not all exercises or activities should aim at leading students straight to specific objectives. Caution should be taken to allow for flexibility. For example, one respondent maintains that, "not all course materials have to focus on objectives in a narrow sense, we want the student... to read around the subject." In this way therefore, not all units will be considered a compulsory component of the course.

The need for flexibility in course development is emphasized because respondents believe that courses which are too rigid and adhere to pre-planned structure force students to go along a very narrow path to achieving the requirements of the course objectives. To them, this is not a friendly and comfortable way of dealing with distance education learners. Also respondents are concerned about quality control in the development of distance education course. They therefore suggest that course developers should ensure that there is a basic match among instructional objectives, the content, the practice of feedback and the grading methods or student assessment strategies.

With some slight difference in the degree of importance, the following items are also preferred, Items 2.3.4 - materials should not contain any evidence of ethnic bias (86%), Item 2.3.5 - materials should match learners' reading abilities (88%), Item 2.3.6 - learners should access the materials (88%) and Item 2.3.7 - learners should afford the cost of the material (87%). The general feeling the researcher gets from the data is that respondents feel that students should be made to pay for their course materials, even if it means paying a portion of it. According to one respondent "students are more likely to do their best work and complete a course if they are paying a significant portion of the cost." They have to be made responsible, and see to it that their money is not wasted. And, bearing in mind some economic

reasons, cost should be kept down. Material should be available at a reasonable cost. This point of view is of significant importance, 87% (53.3% - moderate importance + 33.3% great importance).

Further, respondents advise that materials for the course should be considered in terms of their availability and accessibility to students, 88% (68%-moderate importance + 20%-great importance). For students to make greater use of these materials, materials should be at their reading level in order that students understand concepts and their practical applications.

While the greater majority of respondents feel that course developers should ensure that their course materials are free from gender bias (83%), racial bias (83%) and ethnic bias (86%), there seems to be some mixed feeling or some skepticism about avoiding it in written course materials. For example, one respondent feels that "gender is in our language and hence can't be totally avoidable." The suggestion is to take the above items as "good practice [and] probably more critical to those who might be discriminated against." The respondents suggest that materials should not be conceived of by readers as containing some biases.

The findings of this study here concur with Faith's (1988) observation that for learners to be actively involved in the learning activities, they must find themselves accurately represented in the course materials. She recommends therefore that approaches to course development and delivery should ensure that androcentric bias does not dominate the course content, design and tutorial style.

Finally, a point raised by many respondents is that course materials should be self-contained and adequate enough not to assume that all distance education students have full access to the library. The learners' success is much more dependent on the course materials hence the materials have to be self-teaching, meaningful, interesting, motivating and provocative, especially that neither the teacher nor other learners are always around to give the learner the help and encouragement they may need. Perhaps here it is worth noting a point of view expressed by both Haughey (1991) and Michael (1990) who warn that not all distance education learners are independent, self-directing and self-confident. The

point they raise is that learners are in varying stages of intellectual, cognitive and pychological readiness for self-directed learning activities. Therefore distance educators should be aware of this and provide the neccessary support for the needs of all learners.

Course Content

In this category, the researcher explored guidelines which may influence the structuring and sequencing of course content. The comments of respondents about items in this category are generally fewer than those in all other categories, probably because items were considered to be subject dependent and therefore difficult to answer as stated in the questionnaire.

Figure 7 shows the observed percentages when respondents were asked to indicate the importance of sequencing the course content in the following manner; simple before the complex (Item 3.1.1), easy before difficult (Item 3.1.2), most important to lesser important (Item 3.1.3), basic before advanced (Item 3.1.4), around temporal aspects (Item 3.1.5), around learning problems (Item 3.1.6), around learners' knowledge (Item 3.1.7), around structure of the discipline (Item 3.1.8), around concepts proposed for learning (Item 3.1.9) and around professional requirements (Item 3.1.10).

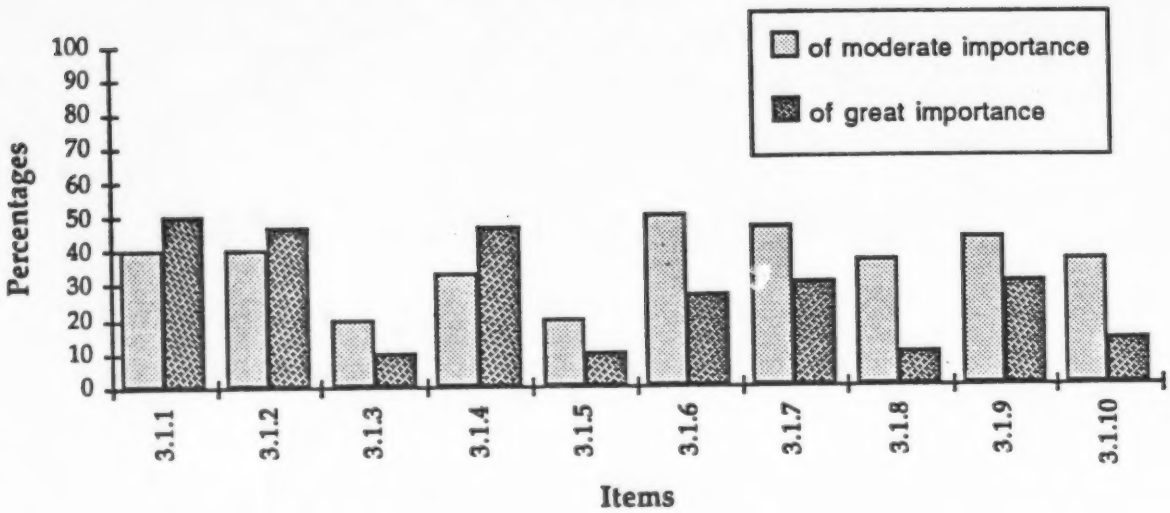

Figure 7: Course Content

Analysis of the data indicates that the most preferred design is that of presenting the simple content before the complex one. The investigated data disclose a high importance, 97%, (43% - moderate importance + 54% - great importance) for this kind of presentation of course content. A corresponding high importance is also drawn by the following structures; i) easy before difficult, 93%, (43% - moderate importance + 50% great importance, ii) around problems intended for learning, 92%, (60% - moderate importance + 32% - great importance, and iii) basic before advanced, 89%, (37% - moderate importance + 52% - great importance). As observed from the results, there are slight differences between the importance observed.

Generally, respondents believe that distance learners benefit most when course content is structured from simple and basic then moving up to the complex and advanced concepts. Respondents warn that care should be taken not to make the first concepts too easy or too simple to deceive students into thinking that the entire course will be too simple. When this is the case, students run into the risk of being unable to handle increasingly difficult/advanced concepts leading eventually to their failure and/or withdrawal from the courses.

In as far as the items in this category are concerned, the study underscored the importance of item 3.1.8 - Structuring the content of the course around the structure of the discipline (54%). Perhaps respondents do not have many courses which necessitate this kind of structure. However, the important point to note in this category is that structuring and sequencing of the course content shall be dictated by the subject matter, subject discipline and other circumstances. The results of the data here are consistent with Overgaard's (1990), Rowntree's (1981), Holmberg and Bakshi's (1982) and Waldron and Moore's (1991) suggestions for the structuring and sequencing strategies for course content or course activities.

Learner Activities

In this category, respondents were asked to indicate the importance of structuring learning activities in a manner that allows; learners to acquire factual knowledge (Item 4.1.1), learners to pursue their own intellectual interests (Item 4.1.2), learners to develop independent ideas (Item 4.1.3), opportunities for learners to share ideas with other learners (Item 4.1.4), and that learning activities should be clear in as far as the expectations of the tutor are concerned (Item 4.1.5). Figure 8 therefore shows the observed responses to these items.

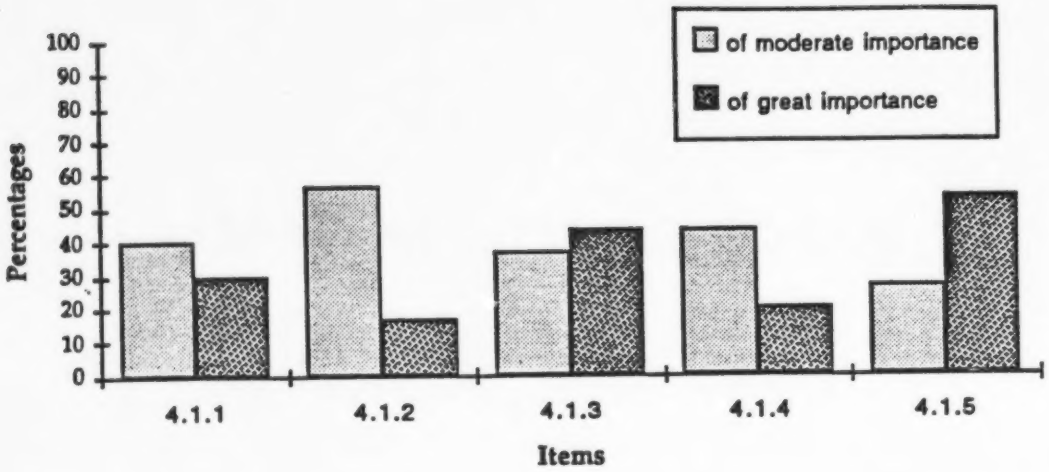

Figure 8: Learner Activities

From the observed results, it is clear that respondents believe that good instructional activities or exercises should allow the learners to pursue their own intellectual interests (Item 4.1.2). Respondents attach a 92% degree of importance for this need (31%-moderate importance + 62%- great importance). Respondents' observation is that once the students know what they are expected to do, they assume an active participation. They have observed that active participation in learning is not only motivational and rewarding to students but also that it increases retention of knowledge and helps students to see connections among related concepts much more readily.

Further, the data still reveal a high importance, 89% (41% moderate importance + 48% great importance) for the need to structure these learning activities in a way that they allow students to develop their own independent ideas. Respondents recommend that students should be guided to discover the important

concepts/learning processes on their own. This helps students to learn to think for themselves and to develop a task for learning on their own. In this way, students are encouraged to explore course materials beyond factual concepts presented to them. Respondents see the need for students to be critical, open-minded and analytic in their studies. The findings of the study here correspond to Schiemann's (1990) contention that activities should extend knowledge beyond recall and recognition.

Concerning the importance of tapping factual knowledge from the students, the results indicate a 78% (44%-moderate importance + 33%-great importance) preference for this item. Although a significant number of respondents feel that there are situations where students have to be asked the facts learned from the course materials, they continue to maintain that students should not be asked only to regurgitate what they have learned. For example, in order to determine if they have grasped the concepts, students should be made to relate these to their experiences. Respondents feel that factual or definitional types of information should be avoided, but not in all situations. The concern is to structure exercises in a way that they extend to levels where students' reflectivity, critical thinking and problem-solving skills are exercised.

Beyond the factual knowledge, respondents prefer to let students pursue their own intellectual interests (92%). Among other things, as one respondent states, this is done by providing more open-ended kind of assessment questions which encourage the learner to "think more independently, to develop their own responses and ideas and to relate what they are learning to personal experience." The results here agree with McLaren, Teare and Schiemann's (1993) suggestions emphasizing the need to include variety of activities in the course.

Finally, the item that is least preferred in this section is Item 4.1.4, that is, allowing students to share ideas with other students. This item attracted only 70% (48%-moderate importance + 22%-great importance). However, respondents feel that there are positive contributions when different ideas and attitudes are brought to a learning situation. Therefore, their preference is to have students "meet on line",

when technology is there to facilitate this. Preference is also expressed for face-to face interaction. However, some respondents feel that this kind of interaction is costly, particularly where students are far away from the learning centers and therefore have to travel long distance to meet other students. Whenever possible, this should be arranged.

Generally, many respondents are not favorable to active student-student interaction. Their expressed views indicate that their top priority is to have frequent opportunities for teacher-student interaction in order to help create rapport between the teacher and the students. Overall, it seems that respondents agree that there is need to structure a variety of activities that ask the learners to demonstrate, for example, their levels of critical thinking, critical reflectivity, problem solving skills and other cognitive levels such as comprehension, application and evaluation. This observation is reinforced by Jenkins (1987) who maintains that a good distance teaching text should contain numerous activities. The participating course developers maintain that for learning to be instructionally effective, activities should be defined by the goals or objectives of the course.

Learner Assessment

This section is an extension or continuation of the preceding section, Learner's Activities. In addition to complementing the "Learner Activities" section, it goes further to explore the frequency and/or immediacy as well as types or kinds of exercises, assignments, tests or examinations that participants employ in their courses. Therefore, much of the discussion that went on in the section "Learner Activities" is applicable here.

Figure 9 shows the percentages calculated when respondents were asked to indicate the importance of Item 4.2.1-criterion - referenced testing, Item 4.2.2 - formative evaluation, Item 4.2.3-summative evaluation, Item 4.2.4-exercises that challenge the affective domain and Item 4.2.5 - the need for more open-ended kind of assessment strategies.

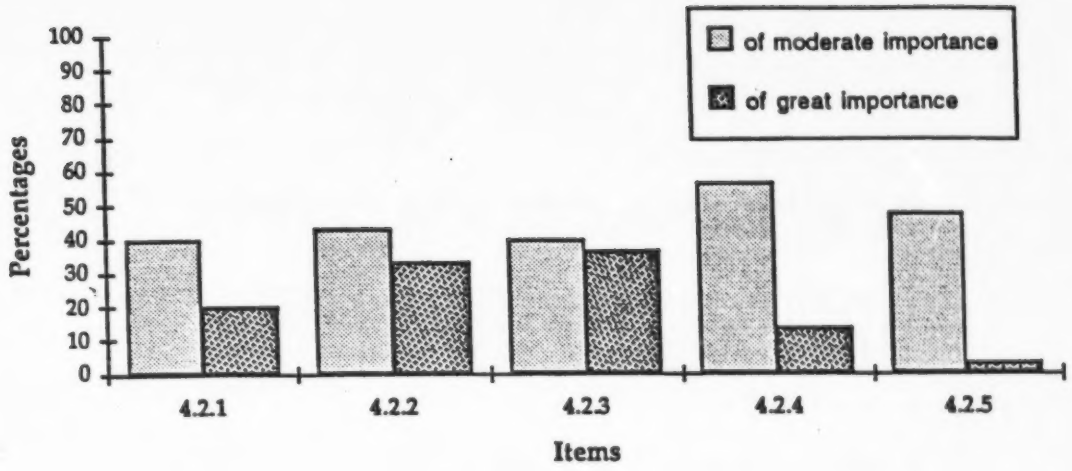

Figure 9: Learner Assessment

Learner assessment is concerned with the progress of the students towards the stated objectives. Patterns of assessment strategies which attracted many respondents are the summative and formative evaluation strategies. In order of importance, summative evaluation drew the highest level of importance, 92% (48% - moderate importance + 44% - great importance). Summative evaluation is used to assess learners' final outcome in relation to the objectives of the course. Usually, a standardized norm - referenced examination is given to assess this.

However, one concern the respondents raise is that some students are not in favor of summative evaluation, particularly the examination. Perhaps students' dislike for summative assessment stems from the practice of limiting this type of examination to "pen and paper" work. Since courses are written to include aims and objectives that call for variety of assessment procedures, respondents would like

examinations to reflect these varieties of assessment techniques.

For monitoring students progress on an ongoing basis, respondents rely on formative evaluation. The importance of this item 4.2.2, (89%) complement some discussions on the section "Learner activities", where respondents indicate that the most needed interaction in helping the learner to do well in their courses is the student-tutor interaction as opposed to student-student interaction. Student-tutor interaction enables the tutor to offer help immediately where necessary. For formative evaluation, respondents use various assessment measures such as tests, quizzes, assignments, journals, etc.

For the remaining items in this section, Item 4.2.1- criterion - reference testing (69%), Item 4.2.4 - affective domain (78%) and Item 4.2.5 - self-assessment questions (60%), the researcher is of the opinion that the items have been already discussed under the section "Learner Activities", particularly when discussion Items 4.1.2 and Item 4.1.3 in that section.

Finally, the respondents generally believe that the assessment strategies should be balanced against the course content, course objectives, the nature of the course, students' characteristics and the time and cost involved in doing the assessment. The other important point raised by the respondents is that any assessment strategy employed should enable the students to learn from it and to improve with feedback.

Evaluation

In this category, respondents were asked to rate the importance of tutor evaluation (4.3.1.), course evaluation (4.3.2), student evaluation (4.3.3), instructor's evaluation (4.3.4) designers evaluation (4.3.5) and objective evaluation (4.3.6). As it may be noted, this section is a continuation of the section it follows, Learner Assessment. Here the researcher wanted to determine who should be evaluated in order to determine the worth of the course or the learning exercises/activities. Figure 10 indicates respondents' preferences.

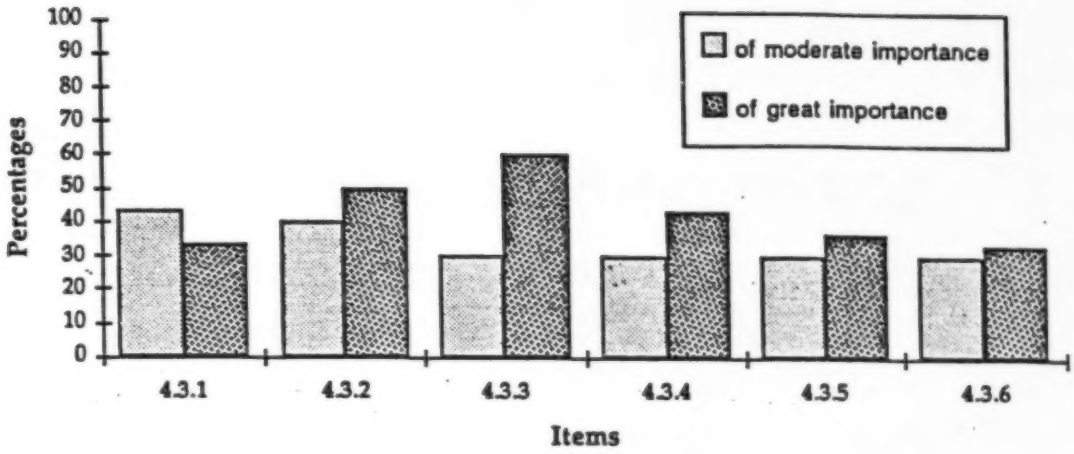

Figure 10: Evaluation Plan

The whole question of the importance of evaluation is greatly attached to course evaluation (Approximately 97%, 43%-moderate importance + 54% great importance) and to learners' evaluation (Approximately 96%, 32%-moderate importance + 64%-great importance). Course evaluation is considered important because it encourages feedback from both the tutor and the students. Course evaluation may give feedback about the course content, learning activities, students assignments and the overall design of the course. Some respondents contend that "the best feedback comes in the form of students comments."

In many institutions, students are asked to make general comments about the effectiveness of the course. For some institutions, participation of students in the evaluation of the course is encouraged by enclosing evaluation forms in the course package. With the help and encouragement of their tutors, some completed forms are returned. Respondents feel that courses should be reviewed regularly to allow

for course improvement which is vital to long term success of the course.

It is not surprising to find that the results of the data here suggest that evaluation of students learning is very important, 96% (32% moderate importance + 64% - great importance). This importance has been suggested and discussed under the section "Learner Activities." Reference is also made to the formative and summative evaluation which the respondents feel are vital in determining the effectiveness of the course in progress. The need to provide variety of activities is emphasized and the role the student - teacher interaction plays is considered vital in this aspect.

It appears that respondents are also in favor of instructor evaluation. Although the respondents have indicated a high degree of importance to this item, (82%, 46%-moderate importance + 36% - great importance), it is clear from comments that many institutions are preoccupied with course and student learning evaluation only to the exclusion of instructor's evaluation. Perhaps by rating instructors' evaluation high, the respondents want to bring to our attention the importance of this type of evaluation, particularly that they have observed that it is common for the students and their instructors to be held responsible for the success or failure of the course.

Generally, respondents' comments seems to underscore the importance of evaluating the designers of the course. Their observation is that "course developers are not held responsible for the failure of the course. The blame is often put on student instructor." For some respondents, there is need to assess the developers of the course (71%), while others feel that we should not evaluate the designers/developers of the course but rather the product of the course, which reflects on the designers themselves.

Approaches to Course Development

In this category, the researcher wanted to explore varieties of approaches to the task of developing distance education courses. Such approaches include, course team approach (Item 5.1.1.), the author/editor approach (Item 5.1.2), the contract

approach (Item 5.1.3), the educational adviser approach (Item 5.1.4.) and the "intuition led approach" (Item 5.1.5).

Figure 11 shows approaches preferred and the level of importance attached to each.

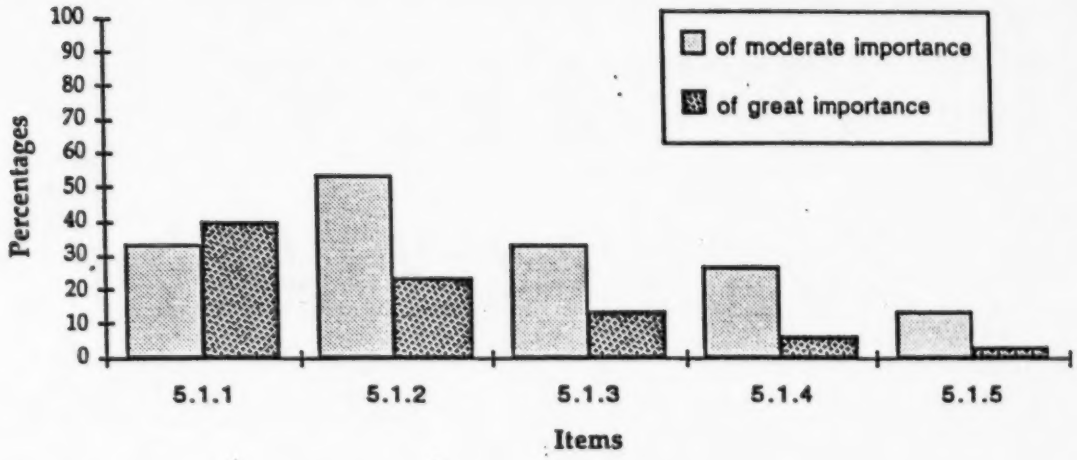

Figure 11: Approaches to Course Development

The general observation is that an approach varies with the course in question, the resource available, the type of writers available, the production schedule and other situations which can work against the use of a particular approach. However, developers tend to perceive the author/editor approach as very important, 92% (64% - moderate important + 28% - great importance). Further, the data continue to reveal a high level of importance to course team approach, 88% (40% moderate importance + 48% - great importance). Respondents maintain that the attractiveness of this approach is that it encourages sharing of responsibilities,

acknowledges the interactive nature of course development task and has potential to produce courses of better quality.

Findings also point to potential serious problems with the course team approach. For example, there seems to be a persistent tendency to talk of "the curse of course team," an underlying characteristic which has the potential of giving rise to unfavorable conditions of course team approach in some institutions. The 'curse" of the course team is attributed mainly to the number of members of the course team. Respondents feel that the number should be kept small, for example, to three persons, so that courses should not take "forever" to be developed.

Respondents embrace the course team for various reasons. The general agreement is that the specialized expertise contributed by each member of the team is very crucial in producing excellent courses. This positive attitude comes clearly through one respondent's comments that "I value all my team members very highly .... Seeing the manuscript from more than one set of eyes strengthens a course." Therefore, the general conclusion made from the data here is that there are situations where the team approach is highly needed, for example, "where the course being developed is multidisciplinary" and that whenever a team is involved in developing courses, there should be a course manager who mediate and makes final decisions, for example, about the style, or there should be other "mechanisms for checks and balances." The findings here are supported by Bakshi (1989), Rowntree (1981), Miller (1987) and Teare and Schiemann's (1993) viewpoints about the use of the team approach to course development.

Of the three approaches favored by the respondents, contracting out course development attracted the least favorable response, 60% (43%-moderate importance + 17%-great importance). Some respondents feel that this approach is costly, for example, one responded has observed that contracting out course development is not as

> effective as in-house development, unless there is a lot of checks and evaluation. More often than not, by the

time all the re-writing has been done, the contracted course will have cost much more for an inferior product.

Further, respondents feel that when this type of approach is used caution should be taken to use developers who have some experience or knowledge about distance education teaching. The impression the researcher gets from the data is that approaches are effective at different times in different situations.

Overview of Categories

The foregoing discussions stem from the study of the problem "What guidelines are utilized by selected distance education courses?." Significant guidelines are judged by the observed importance attached to each item in the five categories explored in the study. To this end therefore, it would be interesting, enlightening and more instructive to make a brief overview of the five categories in relation to the contribution of each category to the research question.

Although the data reveal that respondents accord significantly different levels of importance to every item within each category, there are some categories which enjoy a fairly broad level of importance across all items. In order of preference or importance, Category 2-**Resources** is most critical to the development and delivery of distance education courses. Within this category, the main mode of course delivery is explored as well as other technologies which play a dominant role in the delivery of distance education courses.

Also, a number of factors or determinants for choosing the right media, as well as those for choosing course/learning materials are explored. In addition to these factors, Category 2 explores students support services, which may embrace tutoring, counselling, group learning, library services, funding etc.. In all but one item (Item 2.2.8-test centers), a fairly high level of importance is attached (52%-group learning to 100%-print).

Furthermore, the category that displays a relatively higher level of importance across all items is Category 4-**Presentational Characteristics**. Within this category,

several factors which may be instrumental in facilitating learners' success are considered. These factors include i) design of the learning activities and the provision of feedback, ii) evaluation and assessment strategies which may be done through the formative and/or summative evaluation. Items in this category may provide a way of knowing or determining if the objectives of the course have been met. It turns out that all items in this category are considered very important (60%-Item 4.2.5 to 97%-Item 4.3.4).

The third category that enjoys a relatively higher importance among items is Category 5-**Approaches to Course Development.** Items in this category explore approaches to course development which are considered useful in distance education courses, like the course team and the author/editor approach. All but one item (Item 5.1.4) are considered useful approaches to distance education course development.

A review of facilitating literature indicates that respondents' preference here is consistent with the attitude expressed by Smith (1980) who contends that the Educational Adviser approach (Item 5.1.4) has serious deficiencies, a lack of specialist staff, the absence of quality control mechanism, for example. In addition to this model, Smith claims that the academic intuiton approach too is no longer an acceptable approach for distance education. This claim concurs with the respondents' rating. Item 5.1.5-Intuition aproach attracted the lowest percentage of importance in this category.

The remaining two categories, that is, Categories 1-**Potential Learners** and 3-**Structure and Sequence**, have number of items which reveal a low degree of importance. In Category 1 items explore ways in which developers may ensure that there is congruence between the characteristics of the targeted learner population and the characteristics of the course, like the design of the course, the reading level of the course material and the nature of learning activities. The items most critical to this issue are the age of the learners, their educational needs and their entry level skills. Items like geographical locations, professional background and socio-economic background are considered insignificant or not detrimental to students'

success in distance education courses. Therefore three of the nine items in this ctegory are considered not important in distance education course development issues.

As for Category 3, the items explore the design embodied in the course materials, for example, presenting easy concepts before the difficult one or simple before complex etc. For the items which are considered important, the study has recorded 54% (Item 3.1.8) to 96% (Item 3.1.1).

Structuring the course content around temporal aspects as well as ordering them according to their importance are not considered important by the respondents. Within Category 3, two items are discounted as not important or useful in distance education courses.

Each of the five categories explored in this study contributes, in a special way, to an understanding of the guidelines that may be useful in the development of effective and attractive distance education courses.

Conclusion

Although the core of the data is to answer the question "What guidelines are utilized by selected Alberta Distance Learning courses and how are these supported or facilitated by theoretical formulations?," the researcher has chosen to systematically discuss only those guidelines which are considered very important (moderate + great importance) by the participating course developers. This was done assuming that these guidelines are of great significance to the success of courses. Since this may not always be true, it is therefore instructive and informative to present all guidelines explored in this study and the participants' responses to them. The observed results of these guidelines are summarized in Table 2.

Table 2 does not only give the reader the whole picture of the results of the data but also it enables the reader to see other guidelines against which the importance of those discussed are decided. One general conclusion drawn from the data is that a great number of the respondents believe that no one set of guidelines

can be applied to all situations. Developers choose those that interest, attract and are useful to their situations. Respondents comments tend to be credible, because we happen to know from the way this study was conducted that reliability of the questions is high and also that the respondents are highly experienced.

Table 2: Profile of Responses

IMPORTANCE

CATEGORY 1	POTENTIAL LEARNERS	GREAT	MODERATE	NEUTRAL	LITTLE	NO
ITEM 1.1.1	Age of targeted learners	76%	13.3%	-	6.7%	-
1.1.2	Educational level	50%	40%	6.7%	3.3%	-
1.1.3	Entry level skills	66.7%	16.7%	-	-	-
1.1.4	Socio-economic background	3.4%	24.1%	41.4%	20.7%	10.3%
1.1.5	Professional background	7.4%	33.3%	3.3%	18.5%	7.4%
1.1.6	Educational needs	55.6%	33.3%	7.4%	3.7%	-
1.1.7	Personal interest	28.8%	28.8%	21.4%	14.3%	7.1%
1.1.8	Geographically dispersed	13.3%	23.3%	16.7%	33.3%	13.3%
1.1.9	Access to technology	30%	40%	23.2%	3.3%	3.3%
CATEGORY 2	MEDIA					
2.1.1	Media + Course objectives	50%	33.3 %	13.3%	3.3%	-
2.1.2	Media + Subject matter	33.3%	50%	16.7 %	-	-
2.1.3	Media Accessibility	56.7%	36.7%	6.7%	-	-
2.1.4	Media at appropriate time	46.7%	33.3%	16.7%	3.3%	-
2.1.5	Media at reasonable cost	43.3%	46.7%	6.7%	3.3%	-
2.1.6	Media preferred	21.4%	58.6%	13.8%	3.4%	-
2.1.7	Media combination	31%	48.3%	20%	-	-
	SUPPORT SERVICES					
2.2.1	Funding	55.4%	37.9%	6.9%	-	-
2.2.2	Non-teaching staff	26.7%	40%	26.7%	6.7%	-
2.2.3	Academic teaching staff	40%	56.7%	3.3%	-	-
2.2.4	Student service unit	11.5%	53.8%	26.9%	7.7%	-
2.2.5	Library facilities	25%	50%	21.4%	3.6%	-
2.2.6	Learning centers	10.7%	39.3%	39.3%	10.7%	-
2.2.7	Group learning	3.4%	48.3%	41.4%	6.9%	-
2.2.8	Test centers	13.8%	24.1%	37.9%	20.7%	3.4%
2.2.9	Program counseling	30%	50%	10%	6.7%	3.3%
	COURSE MATERIALS					
2.3.1	Material - Course objectives	90%	6.7%	3.3%	-	-
2.3.2	Materia Free gender bias	43.3%	40%	10%	6.75%	-
2.3.3	Material - Free racial bias	60%	23.3%	10%	3.3%	3.3%
2.3.4	Material - Free ethnic bias	58.6%	27.6%	10.3%	3.45%	-
2.3.5	Material + Reading abilities	66.7%	20%	6.7%	3.3%	3.3%
2.3.6	Material - Available	68%	20%	8%	4%	-
2.3.7	Material - Affordable	33.3%	53.3%	13.3%	-	-
	TECHNOLOGY					
2.4.1	Print	96.3%	3.75%	-	-	-
2.4.2	Audio tapes	11.5%	53.8%	30.8%	3.85%	-
2.4.3	Radio	23.1%	34.6%	30.8%	11.5%	-
2.4.4	Video Tapes	11.5%	62.5%	26%	-	-
2.4.5	Teleconferencing	15.4%	50%	23.1%	11.5%	-
2.4.6	Electronic mail	15.4%	30.8%	30.8%	15.4%	7.7%
2.4.7	Computers	16%	40%	28%	16%	
CATEGORY 3	STRUCTURE AND SEQUENCE					
3.1.1	Simple then complex	3.6%	42.9%	3.6%	-	-
3.1.2	Easy then difficult	50%	42.9%	3.6%	3.6%	-
3.1.3	Most-lesser important	10.7%	21.4%	46.4%	14.3%	7.1%

3.1.4	Basic then advanced	51.9%	37%	11.1%	-	-
3.1.5	Around temporal aspects	15%	30%	45%	10%	-
3.1.6	Around learning problems	32%	60%	4%	4%	-
3.1.7	Around learners' knowledge	34.4%	53.8%	11.5%	-	
3.1.8	Around structure of discipline	11.5%	42.3%	34.6%	7.7%	3.8%
3.1.9	Around concepts for learning	34.6%	50%	15.4%	-	-
3.1.10	Around profes. requirement	16.7%	45.8%	20.8%	12.5%	4.2%
CATEGORY 4	LEARNING ACTIVITIES					
4.1.1	Acquisition facts	33.3%	44.4%	11.1%	11.1%	-
4.1.2	Own intellectual interests	8.5%	63%	14.8%	3.7%	-
4.1.3	Develop independent ideas	48.1%	40.7%	11.1%	-	-
4.1.4	Sharing ideas	22.2%	48.1%	22.2%	7.4%	-
4.1.5	Instructors' expectations	61.5%	30.8%	3.8%	3.8%	-
	LEARNERS ASSESSMENT					
4.2.1	Criterion-reference testing	23.1%	46.2%	25.4%	11.5%	3.8%
4.2.2	Formative evaluation	38.5%	50%	11.5%	-	-
4.2.3	Summative evaluation	44%	48%	8%	-	-
4.2.4	Challenge affective domain	14.8%	63%	14.8%	7.4%	-
4.2.5	Self-assessment exercises	4%	56%	28%	12%	-
	EVALUATION PLAN					
4.3.1	Tutor Evaluation	35.7%	46.4%	14.3%	3.6%	-
4.3.2	Course evaluation	53.6%	42.9%	3.6%	-	-
4.3.3	Students progress evaluation	64.3%	32.1%	3.6%	-	-
4.3.4	Instructor Evaluation	48%	33%	19%	-	-
4.3.5	Designer Evaluation	39%	332%	25%	34%	-
4.3.6	Objective Assessment	44%	39%	17%	-	-
	APPROACHES TO COURSES DEV.					
5.1.1	Course Team	48%	40%	8%	4%	-
5.1.2	Author/Editor	28%	64%	8%	-	-
5.1.3	Faculty	17.4%	43.5%	21.7%	13%	4.3%
5.1.4	Educational Adviser	8.7%	34.8%	34.8%	13%	8.7%
5.1.5	Intuition	21.1%	36.8%	26.3%	15.8%	-

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The data provided in Chapter Four included those derived from the questionnaires supplemented and/or complemented by interviews and discussions with participating course developers. Conceptually, the data were organized around five categories; Targeted Learners, Media, Structure and Sequence, Learning Activities and Course Development Approach. Consequently, the discussion of the data dealt with each of these categories.

The five categories addressed the use of conceptual guideline in developing distance education courses. Interpretation of the findings tended to take the form of generalizations, periodically interspersed with specific examples, and in some cases, examples are in the words of the respondents. However, while the interpretative statements were of a general nature, there was remarkable consistency in the ideas and comments expressed by the participating course developers.

Virtually, all course developers in this study tended to use course development guidelines when developing courses but their focus or perceptions of important guidelines to be used varied. The very nature and purpose of the course determined or dictated guidelines to be used and the design to be followed.

One of the strengths of the use of conceptual guidelines had been that they gave course developers some interactive mechanism through facilitating discussion and helping them to make informed decisions. From this observation, participating course developers believed that the use of conceptual guidelines in developing distance education courses could improve the quality and effectiveness of the courses. Participating course developers had also observed that developers have an important bearing on the development and delivery of the courses they develop.

Summary Conclusions

Substantively, the interesting feature of this study was that no claim was made by the respondents of a single and/or simple 'recipe' for the design and development of distance education courses. Respondents' experiences have indicated that developing quality and successful or effective distance courses could be approached from different angles. This has been echoed by many respondents, among them one who clearly stated that "there is no silver bullet that cuts" across all learning disciplines or courses. On the other hand, within the data discussed, examples and discussions presented in chapter four, there was evidence that there is a series of guidelines which when used and critically considered for specific situations are likely to contribute to better quality and effective courses. Conclusions about these guidelines, as well as their implications for practice, research and theory are summarized in the discussions that follow.

Principal Mode of Delivering Distance Education Courses

Of all guidelines for developing distance education courses explored in this study, one of those which stood out as being very important, as revealed by the participating course developers, was that of developing print-based courses (Item 2.4.1). Respondents indicated a heightened awareness of the distinctiveness and the advantages of print as the main mode of delivering distance education courses.

In elaborating their views and perceptions, they justified the importance of this on the basis of the versatility, durability, inexpensiveness and retrievability of printed materials. Other experiences shared by the participating course developers were that printed materials are easily replaceable and are subject to few breakdowns.

An observation made by the researcher during visits to some institutions was that print-based material was the most common form of course delivery within the participating institutions. However, many courses were supplemented or supported by other technologies. A list of these technologies is presented in Appendix H.

Multi-Media Approach for Course Delivery

Having acknowledged that technology was an essential course component and that print had its shortfalls, respondents contended that there was a need to incorporate different forms of technology to enhance the quality of instruction (Item 2.1.7). So far, in some participating institutions, many courses included a combination of print package, audio and video resources. In addition to those, courses were increasingly supplemented or supported by teleconferencing, video conferencing, faxing, using E-Mail and computers (Item 2.41 to 2.4.7). However, participating course developers noted that not all courses required media other than print. Therefore, the use of a multi-media approach for course delivery should be carefully considered.

Respondents also believed that technology properly selected and implemented had the potential to improve the instruction of the course, to increase access and flexibility for learners and to improve communication between the tutors and the learners. Eventually, all these could contribute to the progress and success of the learners. Other responses suggested that access to technology reduced the need to travel long distance for the purpose of a tutorial meeting. Learners and tutors could meet on-line, for example, in teleconferencing courses. Perhaps this could cater to a preferred learning style for those learners who might be intimidated by the physical presence of the tutor.

Resources for Distance Education Courses

Respondents maintained that cost was the main factor in choosing technology to enhance the instruction of the courses (Item 2.1.5). The researcher observed that many courses in the participating institutions were operated on a partial or full time cost recovery basis. However, some courses received funds from external sources.

Therefore respondents' suggestions were that, in considering media to enhance course instruction, selection criteria should locate those which could be made available to learners at reasonable cost (Item 2.1.5) and at a time convenient to them (Item 2.1.4). Further, selection criteria should insure that technology

selected and used is preferred by both the learners and tutors (Item 2.1.6). Preference here referred to the effective use of technology. Participants maintained that effective utilization was possible when users were equiped with the knowledge, skills and competency to use the technology.

The point of view that has been reiterated and emphasized by the respondents was that selection criteria should address the nature, objectives and purposes of the course. They stressed the importance, for example, for the subject-matter of the course to be easily translated into the media chosen (Item 2.1.2). This could lead directly to the realization of the course objectives.

It is important therefore that course developers should develop a course-related list of technologies likely to support the delivery of the course, then applying the guidelines or criteria discussed here, select appropriate ones for the course.

Learners - Support Services

Access to technology was experienced as one of the best ways for providing students with the support they needed for successful completion of their courses. For the participating institutions, learner-support services included tutoring, library services and counselling (Items 2.2.4, 2.2.5, 2.2.7 and 2.2.9). The perception of participating course developers was that these services would be best utilized if some technologies could be made available to facilitate them, for example, telephones, teleconferencing, fax machine, etc. (Item 2.4.1. to 2.4.7).

Many participating course developers have commented on the value of human support, particularly the learner-tutor interaction. Respondents considered the level of communication between the tutor and the learner very crucial with an important bearing on the effectiveness and success of students' progress and eventually on the success of the whole delivery system. To provide direct contact with the learners, many participating tutors used telephones and fax machines. Participating course developers recommended that provision of telephone answering machines be used to facilitate communication, especially in times when the students might try to reach the tutors when tutors are not in their offices.

The rationale for using technologies such as fax machines and telephones was well communicated by the respondents. In addition to allowing direct communication between the tutor and the learner, one key strength of such technologies is their potential to offer immediate feedback. Immediate feedback provided by the tutor was deemed to be useful for developing or enhancing learners' motivation and active participation in their learning exercises. If done effectively, the deprivation of physical contact may be less felt.

The respondents observed that the use of some technologies, for example, fax machine, permitted rapid transmission of students' work, like assignments. The use of teleconferencing was another good example of such rapid response time.

Respondents contended that institutions should provide tutoring as an integral service available to all learners. This issue should be looked into by those in charge of developing and implementing courses. It seems necessary therefore that criteria for establishing the availability of support services needed for effective implementation of the course should include establishing the availability of academic teaching staff for the purpose of tutoring, marking and even providing some counselling (Item 2.2.3). Not only did tutors in this study appreciate the need to carry out this task, but they also felt that the task should be carried out with commitment and effective care and concern. For example, some respondents gave learners their home telephone numbers for contact outside the official working time.

In addition to the tutoring service and media for facilitating this support, respondents stated that learners benefitted from the use of library facilities (Item 2.2.5). Since learners are studying by a distance learning mode hence away from the centres where main libraries are located, usually, library materials they request are sent to them. The researcher observed that in many participating institutions of this study, learners' requests were received either by telephone or fax and materials were subsequently mailed to them. Like the tutoring service, the library service provided instructional support to students. Other technologies reported to provide this type of support were the teleconferencing link and computer conferencing. The perceptions of participants generally were that a variety of

support services would promote and enhance instruction, motivation and activate participation of learners and eventually could lead to the successful completion of their courses.

Printed Course Materials

Because there is no teacher between the distance education learner and the learning materials, participating course developers asserted that the design and content of the learning materials should be a "tutorial-in-print." That is, learning activities should be designed to guide and teach the learner. Participating course developers also remarked that learning activities vary according to pedagogical reasons, the subject matter and the purpose of the activities and the way they are flagged in the text.

Many developers in this study supported the idea of self-instructional and self-contained material with a variety of learning activities that would require learners to respond in some specific ways. The participating course developers maintained that in developing courses, developers should strive for variety of activities and a range of intellectual and cognitive responses to their course materials. Responses could call for factual knowledge (Item 4.1.1), outside ideas and experiences to enhance content presented to them (Item 4.1.2 and 4.1.3) and could challenge learners' affective domain (Item 4.2.4). The consensus of developers in this study was that a variety of activities should be a central part of the instructional strategies involved in the development of the course. Many respondents regarded the activities as opportunities for learners to think for themselves, to monitor their progress throughout the course, and to have confidence in their learning situations.

Further, the prime concern of the developers in this study was that learning materials and learning activities presented should actually teach and be understood by all learners (Items 2.3.5, 3.1.1 and 3.1.2.). In this context, they said that it was important that the language be simple and functional to be understood by all learners (Item 2.3.5.). In addition, activities should be devised and designed to

realize the key objectives of the course (Item 2.3.1.).

Participating course developers have acknowledged that the diverse layout or design of the course should be dictated in part by the objectives for the course. However, many of them observed that learners might benefit most from the materials if the course content and learning activities could be structured from simple or basic to more complex and advanced ones (Items 3.1.1, 3.1.2 and 3.1.4) or around the key concepts or problems intended for learning (Items 3.1.6 and 3.1.9). The major concern of course developers seemed to have been whether these activities in general, met the learners' educational needs (Item 1.1.6).

The general impression gained from the results of the data suggested that participating course developers believed that materials biased toward a certain gender, race and ethnic group could influence the way the learners interact with them. In fact, respondents maintained that learners who might feel discriminated against could be intimidated to learn. Developers therefore prefered that course materials should be examined in the context of gender bias, racial bias and ethnic bias, Items 2.3.2, 2.3.3. and 2.3.4, respectively. Finally, the most important consideration of course development, as observed by participants, was that the material should be designed and written to promote and support the established course objectives (Item 2.3.1).

Assessment and Evaluation

The general impression gained from the results of the data obtained in this study was that the whole question of evaluation in distance education was greatly attached to course evaluation (Item 4.3.2) and also to that of assessing or evaluating learners' progress (Item 4.3.3). Respondents suggested that evaluation should be sensitive to the established course objectives, learners' educational needs and ways in which the course and learning may improve. Participating course developers contended that the value perspectives of people who directly participate in a course could be important in evaluating the course. Therefore, they suggested that learners be involved in course evaluation.

In evaluating a course, for example, participants believed that the best feedback comes in the form of learners' comments and/or other contributions, for example, institutions could make learners complete evaluation forms, such as a questionnaire. When evaluating the course the evaluators could be asked to give feedback about the course content, the learning activities, learners' assignments and tests and the overall design of the course. However, the participants advised that the purposes of evaluation should dictate the areas to be evaluated.

With regard to assessing learners' progress, participants maintained that the assignments and tests given to learners could be an important element in effective assessment of their progress. Participating institutions utilized both formative evaluation (4.2.2) and summative evaluation (4.2.3).

Finally, respondents made reference to the need to evaluate if tutors have been doing their tutoring with effective care and concern (Item 4.3.3). However, the observed practice in many participating institutions was to do the continuous assessment of learners' progress while evaluation of tutors was not attended to. However, since tutoring was considered an integral part of the instructional strategies, some respondents felt that the worth and success of it should be gauged not only through learners' progress and success but also through evaluating how the tutoring has been done. This could be achieved by evaluating tutors themselves.

Course Development Techniques

It became evident during interviews and responses to the questionnaire that the course team and the author/editor approaches (Item 5.1.1. and 5.1.2) had been experienced as the best approaches to developing distance education courses. Worth noting was that course developers in this study were of the opinion that none of these approaches or any other approach explored in this study could be applied across all courses or all institutions. The question of resources available, nature of the courses or preference for the approach as well as time constraints, for example, were crucial in determining the best approach for that particular time and/or particular course.

The view of the participating course developers, for example, was that course teams were mostly needed when the course to be developed was a multidisciplinary course or when high quality courses were needed. For those participating institutions which have some experiences with course teams, course development was done by teams of academics, instructional designers, educational technologists, editors etc. The participants viewed the role of each member of the team crucial for the high quality of the end product, for example, in many course teams the editor was asssigned to coordinate and manage the whole development and production process.

The second commonly used approach, and most preferred by the participating course developers was the author/editor approach (Item 5.1.2). In this approach course development was assigned to contracted authors who worked closely with the in-house editorial staff. Logistic factors such as checking, editing and evaluating were seen as the main task for the editor. It should be noted that participating course developers cautioned that distance education course development should be done by people who have skills/experiences and some knowledge of distance education teaching.

Recommendations

The researcher believes that the views, perceptions and experiences of course developers who participated in this study raise clear practical implications for the task of developing distance education courses. In actual fact, a number of implications for practice emerge clearly from the summary conclusions. These implications relate to: (i) mode of delivering distance education courses, (ii) resources for distance education courses, iii) learners' support services, iii) printed course material, (iv) assessment and evaluation of learners' progress and (v) course development procedures. Guidelines relating to these have been highlighted in the summary conclusions and discussed in a way that points to their implications for practice.

In brief, the implications are as follows:

Mode of delivery

1. **Institutions should be heavily dedicated to printed course/learning materials. Therefore, print should be the core of distance education delivery mode;**
2. **Whenever possible, a multi-media approach to course delivery should be used. For example, a combination of print-based materials, some visual and/or audio resources and other technology may be used.**
3. **Consideration of the mode of delivery to be used should be based on, for example, its role in facilitating instruction, the easiness or comfort inherent in its use, the cost necessary to implement it and the arrangement for learners to access the media.**

Course materials

4. **In developing learning materials for the course, course developers should consider a number of factors or determinants like i) the learners - their skills, knowledge and reading abilities, ii) resources - human and material needed for the successful implementation of the course and iii) technology to enhance learning.**
5. **In developing course materials, course developers should be sensitive to gender, racial and ethnic biases. Particularly, course developers should insure that learners are accurately represented in the course materials.**
6. **Finally, in developing courses, care should be taken (or observed) in the layout and presentation (structure and sequence) of the course content and learning activities, for example, developers may present the simple or basic concepts first then work towards the complex or advanced one.**

Learning Activities and Assessment Exercices

7. **In developing courses, course developers should strive for variety of formats and types of activities and exercises. The variety embodied in these activities**

and exercises should require a range of intellectual and cognitive responses, and should aim at realizing the key objectives for the course.

Resources and Support Services

8. Resources constitute the core of successful development and delivery of distance education courses. Therefore developers should specify all resources needed for the implementation of the course and the support services, which may include tutoring, counselling, library services etc., and some technologies to facilitate their use.

Approaches to Course Development

9. Course development should primarily be the responsibility of authors/developers contracted to write a course. They have to work closely with the in-house editorial staff. However, there are situations where the nature and purposes of the course demand a course team, in such situation a team should be carefully chosen to develop the course.

Evaluation

10. When developing courses, course developers should design and develop appropriate course evaluation techniques. These may include both the formative and summative evaluation.

However, it has to be noted that the practicability of these is dependent upon many variables, for example, the resources available, the nature of the course, its subject-matter and purposes. The researcher trusts that readers or course developers would regard these recommendations as guidelines to be critically considered for specific situations.

Implications for Research

Participants selected for this study were course developers who are not interacting much with the courses they develop, that is, during the implementation

stage. The researcher therefore believes that whatever counts as the strengths and weaknesses of the course may well lie in learners' interests, aspirations and expectations of the course. An interesting study then could be done with the recipients of the course to determine the types/format/design of the course they are more comfortable with, thus leading to the establishment of some guidelines to be used in developing distance education courses.

To expand on the focus of this study, "Guidelines for Developing Distance Education" there is need for a careful study focussing on the whole process of developing distance education courses. This would involve the planning phase, the production/development phase and the delivery/implementation phase. Therefore, the scope of the study shall necessitate a re-writing or replacement of some categories and additional categories especially for the planning phase and the implementation which are not much catered for in this study.

Furthermore, a closer study on this area, "Guidelines for Developing Distance Education Courses" may focus more on the actual practice of developing courses, perhaps a study examining a single course in process of its development.

Finally, it should be remembered that the participants cautioned that there is no "silver bullet" that cuts across all courses or disciplines. Perhaps this warrants a study on its own to determine guidelines useful in an area of study or a discipline, for example, science or social studies. It must also be added that the researcher feels that anything at all which can confirm, strengthen, expand or advance the results of this study to benefit both the practitioners, researchers and learners is highly appreciated.

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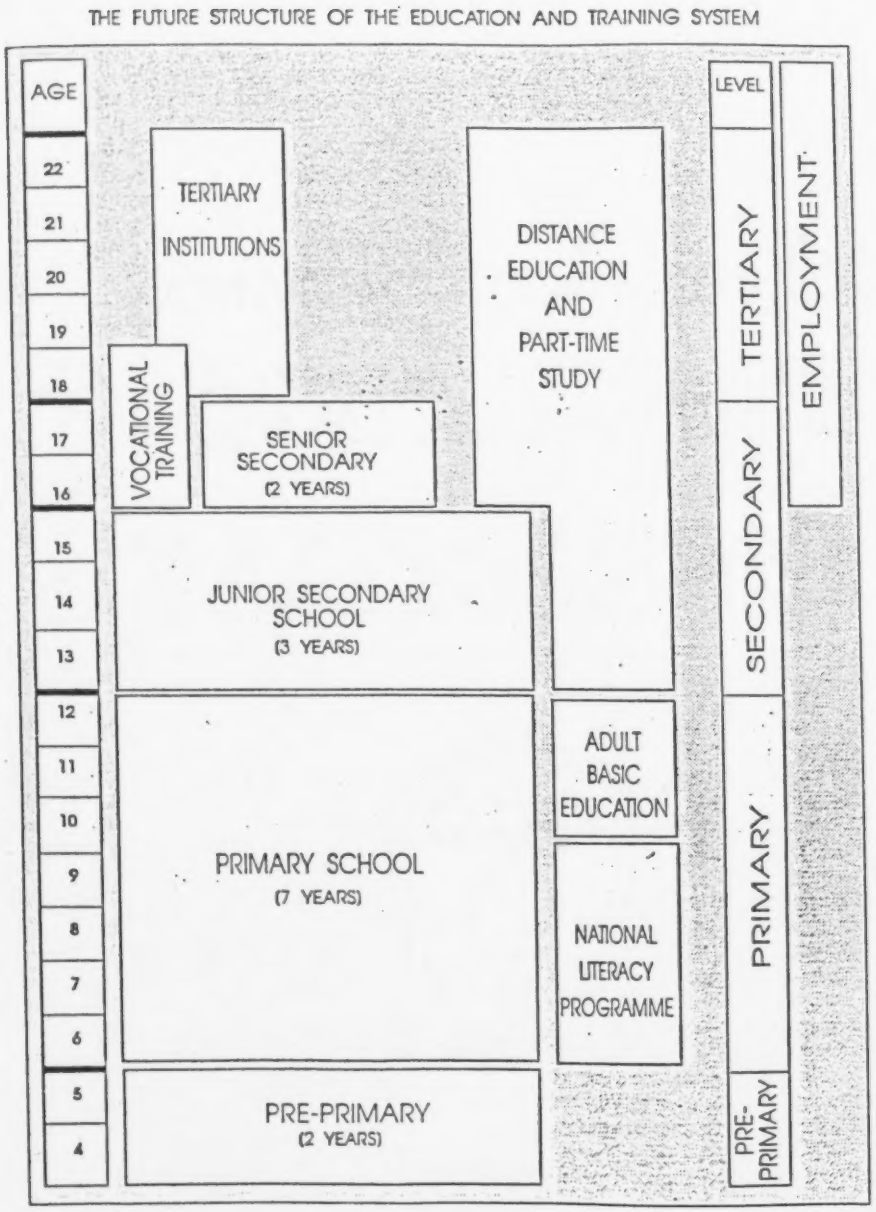
APPENDICES

Apendix A
Education in Botswana



Republic of Botswana (1993:viii)

Appendix B
Sample of Initial letter

Dear Sir/Madam,

My name is Rebecca Lekoko. I am a Motswana woman who works at the University of Botswana. Currently, I am studying at the University of Alberta. One of the requirements in my studies is to do research on an area of interest to me.

Over the years that I have worked with adults at the University of Botswana, Department of Adult Education, I developed a keen interest in distance education, with special focus on course development and course delivery issues. And, as such I have chosen this area for research.

Basically, distance education in Botswana is an individualized form of instruction, and some formal group study-weekends. It is mainly delivered through print-based materials. One of the tasks facing distance educators is developing courses, so some course development guidelines will be appreciated. Now for me to understand some of the course design issues that can be recommended for Botswana, I need to talk extensively to course developers.

Therefore, I am by this letter soliciting your support in this task. I plan to do the research starting in August, 1994, over a period of time that will be specified later. This will involve some visits to your institution and people directly involved with distance education course development issues, formal meeting organized to explain the research, questionnaires sent to selected people and individual interview with selected people. The details of these activities will be also given later.

I wish to thank you in advance for your cooperation and support in this important task.

Yours faithfully,

Appendix C

Letter to Contact Person

Dear Sir/Madam

Thank you for your positive interest, support and willingness to participate in the study "Guidelines for Developing Distance Education Courses."

Further to my letter of the 27th June 1994, and subsequent telephone of the ....1994, I have a questionnaire which I am sending to you, with your permission. The questionnaire is intended to explore guidelines which are used by distance education course developers when developing distance education courses.

Each questionnaire has a code known only by the researcher. The purpose of this code is to allow follow-up in the event that some individuals may not have completed the questionnaire and may be reminded to do so.

Could you arrange at your convenience the distribution and collection of these questionnaire to course developers in your institution. I would appreciate return of the sealed questionnaires along with the uncompleted ones by November 18th 1994.

If you are interested in more information, please contact me at (403) 439-4042.

I would be grateful for any time and assistance you may be able to give during the conduct of this study.

Thank you for your time and effort in this matter.

Sincerely,

Appendix D

Participant letter

Participants,

My name is Rebecca Lekoko. I am a master of education (M.Ed.) student at the University of Alberta, from Botswana, a country which is interested in developing and improving its distance education, especially its course development endeavors.

As part of the requirements for a Master of Education degree, I am writing a thesis on "Guidelines for Developing Distance education Courses". Now for me to understand some of the course development issues, I am conducting this survey. Also I will need to talk extensively to course developers. I hope that the results of this investigation can have application for my country.

I require and kindly ask your help in assisting my effort by completing the attached questionnaire. Your cooperation will be greatly appreciated not only in helping me to meet the requirements for the degree but indirectly to assist my country, Botswana.

You may choose to return the completed questionnaire to .... who is charged with collecting and forwarding of the questionnaire, or you may return it directly to me in the attached envelope.

The questionnaire is the first component of this study. Secondly, you may be asked to participate in an interview lasting approximately 45 minutes. The interview will be focused on your experience in the area of distance education course development. Each interview will be audio-taped and later transcribed.

All information collected will be confidential and any reference to your name, where you work or live will not be made, to protect your anonymity. Further, this study has been approved by the Ethics Committee of the Department of Policy Studies, University of Alberta.

If you would like a copy of the results of the completed research, please provide me with your address and postal code.

If you need more information or you want to discuss some issued raised in the questionnaire, please contact me at 439-4042.

Many thanks for your professional assistance and support.

Appendix E

Reminder Letter

Dear Sir/Madam,

On November 4, 1994, copies of the questionnaire on 'Guidelines for Developing Distance Education Courses' and some self-addressed and stamped envelopes were sent to you, requesting you to distribute them to course developers in your institution. As to date, very few completed questionnaire have been returned to me.

As these questionnaires may have come to you at a very busy time, course developers may not have had time to attend to them. May I please request your assistance in following them up because other phases of this research can not be successfully carried out until a good number of the completed questionnaires are returned.

I would highly appreciate the return of completed questionnaires by January 24 1995. If there are some uncompleted ones that need to be returned, I would be pleased to have them back too. They mean a lot for my records.

Some may have already mailed their questionnaires by the time this reminder letter reaches you. Please convey my appreciation to them for their consideration and professional assistance.

Thank you for your personal assistance and professional support.

Yours Faithfully,

Appendix F
Interview Guide

QUESTIONS

How many years have you been involved in distance education course development issues?

Could you briefly outline your role as a course developer?

Is there need for institutions to train personnel (in distance education course development issues) for the development of their distance education courses?

What specific needs do you feel would be achieved by developing appropriate distance education courses?

Course developers may come up with different course development guidelines, depending on the nature and the purpose of the course, however, I assume there are elements/variables that may be common in many distance education courses, could you comment and give examples?

What are some factors/elements that may frustrate attempts to develop an effective course?

Could you comment on the kind of support services needed for both he development of a distance education course and for the delivery of a distance education course?

What characteristics of distance education learners contribute to their success in distance education courses?

I am aware that the nature of the course normally results in the patterns of the assessment strategies and learning activities, however, I assume there are strategies which may be applicable to many distance education courses, could you comment and provide examples?

What specific assessment strategies work well for your distance education learners?

In your view, what is the best way of presenting learning activities/exercises to distance education learners?

How does your institution determine the value/importance of the course to be developed?

There are several approaches to develop courses, which ones are you familiar with?

Appendix G
Questionnaire

GUIDELINES FOR DEVELOPING DISTANCE EDUCATION COURSES

Guidelines for Developing Distance Education Courses

General information and Instructions with respect to the Questionnaire.

This questionnaire is designed to stimulate reflections, thoughts and opinions on guidelines that are used to develop distance education courses. It is also designed to obtain course developers' perceptions of the value and effect of these guidelines.

In general the questionnaire includes the following sections as they relate to course development (Noted by literature).

- *Learner Characteristics*
- *Design Characteristics*
- *Delivery Characteristics*
- *Presentational Characteristics*
- *Support Systems Characteristics*
- *Approaches/Patterns of Development*

The purpose of this questionnaire is to explore these guidelines, their role in distance education course development as well as ways in which they may be operationalized.

This questionnaire is to be completed by course developers in distance education. Your completion and returning of this questionnaire will indicate consent to participate in this study. Your participation is essential and greatly appreciated.

All information collected will be confidential and any reference to your name and your institution will not be made, to protect your anonymity.

If you have comments and questions about any aspect of this questionnaire, please contact me at this address and phone number:

Rebecca N. Lekoko

1. *Graduate Student*
   M,ED (Adult Education)
   Dept. of Educational Policy Studies
   (7-104 N) University of Alberta

2. *3A, 9003 - 112 Street*
   Edmonton, Alberta
   T6G 2C5
   Phone # (403) 439-4042

The questionnaire is the first component of this study. Secondly, you may be asked to participate in an interview. For more information, refer to "Participant letter" accompanying this questionnaire.

I thank you for your cooperation and participation in this study.

Category 1 Potential Learners

The following guidelines may be used by course developers to ensure the appropriateness of the course for the targeted learner population. Please indicate on your right the importance of each guideline when developing distance education courses.

Of no importance	Of little importance	Neutral	Of moderate importance	Of great importance
1	2	3	4	5
☐	☐	☐	☐	☐

		1	2	3	4	5
1.1.1	Age of targeted learners	☐	☐	☐	☐	☐
1.1.2	Educational level	☐	☐	☐	☐	☐
1.1.3	Entry level skills	☐	☐	☐	☐	☐
1.1.4	Socio-economic background	☐	☐	☐	☐	☐
1.1.5	Professional background	☐	☐	☐	☐	☐
1.1.6	Educational needs	☐	☐	☐	☐	☐
1.1.7	Personal interests	☐	☐	☐	☐	☐
1.1.8	Degree to which they are geographically dispersed	☐	☐	☐	☐	☐
1.1.9	Access to technology	☐	☐	☐	☐	☐

Other _____

_____

_____

In relation to the overall rating of the above guidelines, what specific ideas do you have about characteristics that help student do well through distance education?

_____

_____

_____

Category 2 Resources

A. Media

Media here refers to the various forms of distance education course delivery strategies and/or various methods of instruction employed in complementary and supportive roles in the delivery of distance education courses.

To ensure appropriateness of media for the course and for the recipient of the course, the following guidelines may be used. Please evaluate the importance of each guideline when developing distance education courses.

Of no importance	*Of little importance*	*Neutral*	*Of moderate importance*	*Of great importance*
1	*2*	*3*	*4*	*5*
☐	☐	☐	☐	☐

		1	*2*	*3*	*4*	*5*
2.1.1	*The effectiveness of media in fulfilling the objectives of the course*	☐	☐	☐	☐	☐
2.1.2	*The ease with which the subject matter of the course will be translated into those media*	☐	☐	☐	☐	☐
2.1.3	*The availability of facilities for the learner to access media*	☐	☐	☐	☐	☐
2.1.4	*The availability of media at appropriate time*	☐	☐	☐	☐	☐
2.1.5	*The availability of media at reasonable cost*	☐	☐	☐	☐	☐
2.1.6	*Preferences for the media by both learners and tutors (receivers)*	☐	☐	☐	☐	☐
2.1.7	*A combination of medias is better than any one medium*	☐	☐	☐	☐	☐

Other _____

_____

_____

_____

_____

B. Support Services

The following guidelines may be used by course developers to ensure availability of support systems that best serve the development and delivery of distance education courses. Please indicate the importance of each guideline in the development and delivery of distance education courses.

Of no importance 1 ☐	*Of little importance* 2 ☐	*Neutral* 3 ☐	*Of moderate importance* 4 ☐	*Of great importance* 5 ☐

		1	*2*	*3*	*4*	*5*
2.2.1	*Adequate funding*	☐	☐	☐	☐	☐
2.2.2	*Availability of non-teaching staff*	☐	☐	☐	☐	☐
2.2.3	*Availability of academic teaching staff*	☐	☐	☐	☐	☐
2.2.4	*Availability of student/education service unit*	☐	☐	☐	☐	☐
2.2.5	*Adequate library facilities*	☐	☐	☐	☐	☐
2.2.6	*Availability of learning centres*	☐	☐	☐	☐	☐
2.2.7	*Availability of group support service for students who prefer group learning*	☐	☐	☐	☐	☐
2.2.8	*Availability of test centres*	☐	☐	☐	☐	☐
2.2.9	*Availability of program counselling*	☐	☐	☐	☐	☐

Other _____

_____

_____

In relation to the overall rating, what specific ideas do you have about the kinds of support services which can best meet the needs of distance education students?

_____

_____

_____

_____

C. Course Material

The following guidelines may be used in establishing availability of course material and their suitability for the course and for the recipient of the course. Please indicate the importance of each guideline in considering distance education course material.

Of no importance 1 ☐	*Of little importance* 2 ☐	*Neutral* 3 ☐	*Of moderate importance* 4 ☐	*Of great importance* 5 ☐

		1	*2*	*3*	*4*	*5*
2.3.1	*Material should clearly support course objectives*	☐	☐	☐	☐	☐
2.3.2	*Material should not contain any evidence of gender bias*	☐	☐	☐	☐	☐
2.3.3	*Material should not contain any evidence of racial bias*	☐	☐	☐	☐	☐
2.3.4	*Material should not contain any evidence of ethnic bias*	☐	☐	☐	☐	☐
2.3.5	*Material should be appropriate to learners reading ability*	☐	☐	☐	☐	☐
2.3.6	*Material should be available in terms of physical access*	☐	☐	☐	☐	☐
2.3.7	*Materials should be available to learners at a cost within their means*	☐	☐	☐	☐	☐

Other _____

_____

_____

In relation to the overall rating of the above guidelines, can you briefly comment on some ways of ensuring the availability and suitability of course material.

_____

_____

_____

D. Technologies

Distance education course developers can choose from a toolbox of many technologies. Please indicate the importance of each technology in distance education course delivery.

Of no importance 1 ☐	*Of little importance* 2 ☐	*Neutral* 3 ☐	*Of moderate importance* 4 ☐	*Of great importance* 5 ☐

		1	*2*	*3*	*4*	*5*
2.4.1	*Print*	☐	☐	☐	☐	☐
2.4.2	*Audio tapes*	☐	☐	☐	☐	☐
2.4.3	*Radio*	☐	☐	☐	☐	☐
2.4.4	*Videotapes*	☐	☐	☐	☐	☐
2.4.5	*Teleconferencing*	☐	☐	☐	☐	☐
2.4.6	*Electronic Mail*	☐	☐	☐	☐	☐
2.4.7	*Computer*	☐	☐	☐	☐	☐

Other _____

_____

_____

Could you share your views on the kinds of technologies that seem to work well for your distance education learners.

_____

_____

_____

_____

_____

_____

_____

Category 3 Structure and Sequence

A. Course Content

To be instructionally effective, the following guidelines may be used in structuring and sequencing the course content. Please indicate the importance of each guideline in the structuring and sequencing of distance education courses.

Of no importance 1 ☐	*Of little importance* 2 ☐	*Neutral* 3 ☐	*Of moderate importance* 4 ☐	*Of great importance* 5 ☐

		1	*2*	*3*	*4*	*5*
3.1.1	*Simple before the complex*	☐	☐	☐	☐	☐
3.1.2	*Easy before the difficult*	☐	☐	☐	☐	☐
3.1.3	*Most important to lesser important*	☐	☐	☐	☐	☐
3.1.4	*Basic before advanced*	☐	☐	☐	☐	☐
3.1.5	*Around temporal aspects*	☐	☐	☐	☐	☐
3.1.6	*Around problem intended for learning*	☐	☐	☐	☐	☐
3.1.7	*Around knowledge of learners*	☐	☐	☐	☐	☐
3.1.8	*Around unique structure of discipline*	☐	☐	☐	☐	☐
3.1.9	*Around concepts proposed for learning*	☐	☐	☐	☐	☐
3.1.10	*Around the external professional requirements*	☐	☐	☐	☐	☐

Other _____

_____

_____

Could you share your opinions on the kinds of structures that seem to work well for your distance learners.

_____

_____

_____

Category 4 Presentational Characteristics

A. Learner Activities

To be instructionally effective, the following guidelines may be used to ensure appropriateness of learning activities within the structure of the course. Please indicate the importance of each guideline in structuring learning activities for distance education learners.

Of no importance	Of little importance	Neutral	Of moderate importance	Of great importance
1	2	3	4	5
☐	☐	☐	☐	☐

		1	2	3	4	5
4.1.1	Learning activities should help learner acquire factual knowledge	☐	☐	☐	☐	☐
4.1.2	Learning activities should help learners pursue their own intellectual interests	☐	☐	☐	☐	☐
4.1.3	Learning activities should help learner develop independent ideas	☐	☐	☐	☐	☐
4.1.4	Learning activities should allow sharing of ideas with other learners	☐	☐	☐	☐	☐
4.1.5	Learning activities should clearly define expectations of the tutor marker	☐	☐	☐	☐	☐

Other _____

_____

_____

Could you comment on the role and extent to which course developers should decide on the instructional activities within which the learners will be experiencing the course.

_____

_____

_____

_____

B. Learner Assessment

To be instructionally effective, course developers may use the following guidelines to ensure appropriateness of learner assessment. Please indicate the importance of each guideline in structuring distance education assessment strategies.

Of no importance 1 ☐	*Of little importance* 2 ☐	*Neutral* 3 ☐	*Of moderate importance* 4 ☐	*Of great importance* 5 ☐

		1	*2*	*3*	*4*	*5*
4.2.1	*Learner assessment should utilize criterion - reference testing*	☐	☐	☐	☐	☐
4.2.2	*Learner assessment should include assignments that constitute formative evaluation*	☐	☐	☐	☐	☐
4.2.3	*Learner assessment should include examinations that constitute summative evaluation*	☐	☐	☐	☐	☐
4.2.4	*Learner assessment should include exercises that challenge the affective domain*	☐	☐	☐	☐	☐
4.2.5	*Learner assessment should include more open-ended kind of self-assessment questions*	☐	☐	☐	☐	☐

Other _____

_____

_____

Please make note of possible assessment strategies you consider effective in assessing distance education learners progress in a course.

_____

_____

_____

_____

_____

_____

C. *Evaluation Plan*

Whenever possible, course developers should include in their guidelines the following types of evaluation. Please indicate the extent to which each evaluation is important in relation to the effectiveness of the course.

Of no importance 1 ☐	*Of little importance* 2 ☐	*Neutral* 3 ☐	*Of moderate importance* 4 ☐	*Of great importance* 5 ☐

		1	2	3	4	5
4.3.1.	Tutor evaluation	☐	☐	☐	☐	☐
4.3.2	Course evaluation	☐	☐	☐	☐	☐
4.3.3	Evaluation of student learning	☐	☐	☐	☐	☐
4.3.4	Evaluation of the instructor that runs the course	☐	☐	☐	☐	☐
4.3.5	Evaluation of the designers of the course	☐	☐	☐	☐	☐
4.3.6	Objective assessment	☐	☐	☐	☐	☐

Other _____

_____

_____

Could you comment on or list some evaluation outcomes that may lead to the revision of a distance education course.

_____

_____

_____

_____

_____

_____

Category 5 Approaches to course development

The following are varieties of approaches to course development. Please indicate the importance of each model in relation to the quality of the end product (course).

Of no importance 1 ☐	Of little importance 2 ☐	Neutral 3 ☐	Of moderate importance 4 ☐	Of great importance 5 ☐

		1	2	3	4	5
5.1.1	The course team model	☐	☐	☐	☐	☐
5.1.2	The author/editor model	☐	☐	☐	☐	☐
5.1.3	The contract author/faculty model	☐	☐	☐	☐	☐
5.1.4	The educational adviser model	☐	☐	☐	☐	☐
5.1.5	The intuition model	☐	☐	☐	☐	☐

Other _____

_____

_____

Please share your thoughts and opinions on the model that you would recommend for a proposed distance education institution.

_____

_____

_____

_____

_____

_____

_____

_____

Additional General Comments

	Yes	*No*
1. *Approaches to course development are philosophically founded Please comment.*	☐	☐

2. *How has the course development procedures/process (as you see it) changed over the last 2-10 years.*

3. *What are some of the improvement or modification you would like to see done in current and future practices of developing distance education courses.*

Participant Data

Title of your position.

How would you describe your background vis-a-vis the area of distance education course development?

How many years have you been involved in distance education course development?

What do you perceive as your role as a course developer?

4. *What recommendations, in relation to the use of technology would you make in a proposed or newly founded distance education system?*

5. *What questions/issues (in relation to distance education course development) remain unaddressed in your mind after the completion of this questionnaire?*

6. *If you have any additional comments/concerns, please feel free to share them.*

What part of your role or responsibility do you like best?

Can you share your experiences and/or views on some responsibilities and some frustrations of being a course developer?

What part of your roles or responsibility would you like to see changed, why?

Appendix H
List of Technology

Print	Mail
Tutorial	Telephone
Video Cassettes	Electronic Mail
Audio Cassette	Audio Teleconferencing
Computer Conferencing	Slides
Telewriter	Television
Computers	